SIR S. SUBRAMANYA AYYAR ENDOWMENT LECTURE

UNIVERSITY OF MADRAS

2005 - 2006

(9-11-2005)

ON

THE ARCHAEOLOGY OF TAMILNADU AS REVEALED FROM EXCAVATIONS

BY

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Department of Archaeology

Chennai

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Revealed from Excavations

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To

ON Dr. S. Gurumurthy,

With Compliments

THE ARCHAEOLOGY OF TAMILNADU AS REVEALED FROM EXCAVATIONS

from

BY 7/6/06.

T. S. SRIDHAR IAS.,
Special Commissioner
Department of Archaeology
Chennai

PREFACE

I profoundly thank the Chief Secretary to the Government of Tamil Nadu, and Secretary, Tamil Development Culture and Religious Endowment Department for granting permission to deliver the lecture. My sincere thanks to the Vice-Chancellor, the Registrar and Dr. A. Ekambaranathan, Professor and Head of the Department of Ancient History and Archaeology for giving consent to print Sir S. Subramanya Ayyar Endowment Lecture (2005-06) on *Archaeology of Tamilnadu as revealed from Excavations* held at the University of Madras on 9-11-2005. At this juncture it is my duty to say a few words about the endowment which was founded on November 22nd, 1911 by Hon'ble Mr. V. Krishnaswamy Ayyar CSI, B.A.,B.L. member of the Madras executive council. Sir S. Subramanya Ayyar (1842-1924) earned the title "Grand Old Man of South India" for his yeoman's service to the people of Madras presidency. The endowment was established in his name exclusively for the lectureship of topics connected with Ancient History and Archaeology of India. I also thank the staff of the Printing Section for their persistent efforts in bringing out this publication on time.

T. S. SRIDHAR
Special Commissioner

Date : 28-4-2006

INTRODUCTION

I am pleased to deliver the prestigious SIR S SUBRAHMANYA AYYAR ENDOWMENT LECTURE on *"The Archaeology of Tamil Nadu as Revealed from Excavations"*, in the one hundred and fiftieth celebration year of Madras University. I am thankful to Dr. A. Ekambaranathan, Professor and Head of the department of Ancient History and Archaeology, University of Madras, Chennai, for giving me this opportunity. I must confess that this is a rare honour bestowed on a civil servant who is not a practising Archaeologist. Nevertheless, I am one among those who are interested in understanding the glorious heritage of our ancient country. The subject Archaeology and History are of abiding interest and I have tried to do justice to the topic within the constraints of time and resources available to me.

Most human beings have some interest in the past and are always curious about the traces left by their predecessors. To the common man Archaeology tends to be identified with digging. The Greek word *Archaios* means ancient while *logos* refers to its feature i.e., Science. It studies the story of man's past through his material remains; it helps to understand culture, know history and preserve heritage, and it contributes immensely to tourism. Archaeology presents another method of approach to history, it is a study of human cultures through the material remains. Even for the period for which written records are available, archaeology provides useful supplementary evidence and serves to fill in the gaps. The earliest known archaeologist was Nabonidus, king of Babylon, who in the sixth century BCE excavated a temple floor down to its foundation stone laid thousands of years ago.

Archaeology is a continuous search, nay a discovery; it is an endless journey, everything is tentative, not final. Archaeology as we have known always relies heavily on the tools left behind by our forefathers and the human progress is based on technological development. It is true that tools were the basis for human existence and modern computers are the devices evolved from the simple stone, wheel and other artefacts invented by our ancestors. Archaeological

excavations are no longer a treasure hunt but a search for information and a means of answering specific questions. Archaeologists are responsible in classifying and interpreting the artifacts of ancient societies with the evolution of mankind.

Archaeology as a discipline has developed into several dimensions and can be broadly divided into Pre-Historic Archaeology and Historical Archaeology. Due to recent developments in the study of Archaeology, the ecological changes have also been brought under consideration; seperate focus is now given to the study of environmental archaeology and Ethno Archaeology which deals with the study of living peoples and their material culture. Archaeology includes not only excavation but also study of original source materials such as literature, epigraphs, coins and monuments. However, the role of excavation plays a pre-eminent part in identifying the existence of man in the remote past. The ancient civilizations such as Mesopotamia, Egypt, Maya and the civilizations of the east like Chinese civilization, were all exposed through excavations. The excavations at Indus valley and Saraswathy valley culture pushed back the antiquity of Indian history to 3000 BCE. In India the excavations carried out in the respective sites uncovered the Palaeolithic, Neolithic, Chalcolithic and Iron Age settlements. Though the history of Tamil Nadu can be traced from Pre-historic period with the discovery of stone tools as accidental findings, it was the proper and systematic excavation in various sites by different agencies that raised the curtain for understading the past.

When we talk about Archaeology, it is our duty to remember the great pioneers at this juncture, especially in the excavation area. The work done by both Foreign and Indian Archaeologists, who oiled in this field are to be recorded and recognized. The father of Indian Archaeology,-Alexander Cunningham, Robert Bruce Foote, Lord Curzon, Sir John Marshall, Sir Mortimer Wheeler and other Indian scholars have done significant work in the field of excavation. The Archaeological survey of India as the central body regulates the various activities in the field of Archaeology while at the state level, the State Governments' Archaeology departments, Universities and other private organizations carry out excavations in their respective domain.

In Tamil Nadu, the Archaeological Survey of India, Southern circle, State Department of Archaeology, University of Madras, Tamil

University, Thanjavur, Sri Chandra sekharendra Saraswathi Viswa Mahavidyalaya, (Deemed University) Enathur, Kanchipuram, Kerala University and Sharma centre for Education, Pune have undertaken excavations over the years and contributed significantly to reveal the Tamil Nadu's Archaeology.

The State Department of Archaeology was started in the year 1961 with the prime intention of conservation and preservation of ancient monuments in Tamil Nadu and to conduct excavations at historical sites. Later on, its activities were expanded to copying and deciphering of stone inscriptions, and publishing them; the excavated antiquities are displayed in the 14 site museums; chemical preservation of art objects and Registration of antiquities etc. Tamil Nadu stands First in the country in issuing registration certificates.

The excavations are conducted at historically important sites, identified with the help of Archaeological source through exploration by the department. It has so far excavated 27 sites and unearthed various artefacts of different periods. Some of the excavated sites have been converted into site museums. The excavations carried out at Tiruttangal, Mangudi, Modur, Kovalanpottal, Anamalai, Pallavamedu, Boluvampatti, Panayakulam, Kurumbanmedu, Kannanur, Alagankulam and Perur are some of the important sites dating back from pre-historic to that of Historic period. They have yielded excellent artefacts confirming the location of the ancient capitals, trade centers and their relationship between South India and North India and between Tamil Nadu and the Roman Empire.

In keeping with the two fold categorization of Archaeology into Pre-historic and Historic, I propose to split my talk into two parts, each half dwelling on the topic listed for detailed examination. This is a maiden attempt to bring the comprehensive record of so far excavated sites in Tamil Nadu and their results into a composite structure. In each cultural period one major excavation established the ground rules in terms of cultural sequence, artefacts and other associated findings. Subsequent excavations have not only confirmed the results of the earlier findings but also substantiated and supported the out comes of the major excavations. For example, the excavation at Arikamedu established the contacts between the Roman kingdom and South India, which was corroborated by evidences found at Alagankulam.

Most of exploration and excavations have been done in the second half of the 20th century. They are many, numbering more than 120 and are spread over the entire length and breadth of Tamil Nadu. In the first lecture, I shall give an introduction to Geology of Tamil Nadu. There after I propose to take up period-wise classification of excavations beginning from the Palaeolithic and move on to Microlithic and Neolithic Ages and end with the Iron Age or Megalithic period. In the second lecture, I shall cover the Historic period comprising the various kingdoms in Post-Sangam Era, the medieval age and conclude with excavations done during modern times. The excavations in Tamil Nadu disclose the cultural heritage of the Tamils in their varied aspects. They help us to unravel the mysteries of the past, and there from draw lessons for the future. Some suggessions are also made for further research.

II. List of Archaeological Excavations (Institution-wise)

Some of the sites are chance finds, explorations and trial excavations. For the benefit of the readers, names of the excavated places are mentioned in the list.

a. Archaeological Survey of India - 71 Sites

Sl. No.	Excavated site	District	Year	Nature of the site
1	Pallavaram	Chennai	1863	Palaeolithic
2	Gudiyam	-do-	1962-63	Palaeolithic
3	Attirambakkam	Tiruvallur	1964-65	Palaeolithic
4	Neyveli	-do-	1963-64	Palaeolithic
5	Poondi	-do-	1965-66	Palaeolithic
6	Vadamadurai	-do-	1966-67	Palaeolithic
7	T. Kallupatti	Madurai	1976-77	Microlithic & Megalithic
8	Dailamalai	Dharmapuri		Neolithic & Megalithic
9	Togarapalli	Krishnagiri		Neolithic
10	Paiyampalli	Vellore	1964-65 1967-68	Neolithic Megalithic
11	Mullikadu	Dharmapuri		Neolithic
12	Odukattur	Vellore	1916	Megalithic
13	Kambarmedu	Thanjavur	1982-83	Megalithic
14	Perumbair	Kanchipuram	1908	Megalithic
15	Melsathamangalam	Pondicherry	1983	Megalithic Historic
16	Amirthamangalam	Tiruvallur	1944-49	Megalithic
17	Anuppanadi	Madurai	1887	Megalithic
18	Arovile	Pondicherry	1984-85 1985-86	Megalithic
19	Kadamalai Puthur	Kanchipuram		Megalithic
20	Kadaya Nallur	Tirunelveli	1935-36	Megalithic
21	Kaliyapatti	Pudukottai	1937	Megalithic
22	Kalakudipatti	Pudukottai	1937-38	Megalithic

Sl: No.	Excavated site	District	Year	Nature of the site
23	Kanara Palayam	Coimbatore		Megalithic
24	Kaniam Poondi	Coimbatore		Megalithic
25	Keelnatham	Tirunelveli	1903-04	Megalithic
26	Korimedu	Pondicherry		Megalithic
27	Kollur	Villupuram		Megalithic
28	Sanur	Kanchipuram	1950-52	Megalithic
29	Sittannavasal	Pudukottai	1934-35 1975-76	Megalithic
30	Nilayapatti	Pudukottai		Megalithic
	Mottaimalai	-do-		
31	Aranipatti	-do-	1934-35	Megalithic
	Surandapatti	-do-		
	Tachchanpatti	-do-		
	Tudaiyur	-do-		
32	Sadayaparai	Pudukottai	1917	Megalithic
33	Sirumugai	Coimbatore		Megalithic
34	Sulur	Coimbatore		Megalithic
35	Settipalayam	Coimbatore		Megalithic
36	Sothukeni	Pondicherry		Megalithic
37	Nathamedu	Pondicherry		Megalithic
38	Nallampatti	Erode		Megalithic
39	Nattukal Palayam	Madurai		Megalithic
40	Nicham Palayam	Erode		Megalithic
41	Tadampatti	Madurai		Megalithic
42	Tirukattalai	Pudukottai	1917	Megalithic
43	Tiruthu	Tirunelveli	1903-04	Megalithic
44	Tiruppur	Pudukottai	1934-35 1938-39	Megalithic
45	Tuvaraiman	Madurai	1887	Megalithic
46	Tudaiyur	Pudukottai	1934-35	Megalithic
47	Palani	Dindugal		Megalithic
48	Paravai	Madurai		Megalithic

Sl. No.	Excavated site	District	Year	Nature of the site
49	Pulvayal	Pudukottai	1917	Megalithic
50	Perumalmalai	Dindugal		Megalithic
51	Perur	Coimbatore	1970-71	Megalithic
52	Malaiyampattu	Vellore	1970-71	Megalithic
53	Muthrapalayam	Pondicherry		Megalithic
54	Mottur	Dharmapuri	1978-79	Megalithic
55	Varikal	Villupuram		Megalithic
56	Adichanallur	Tirunelveli	1876 1899-1906 1903-04 1914 2003-2004 2004-2005	Megalithic
57	Kaveripattinam	Nagapattinam	1962-67 1970-71 1972-73	Historic
58	Kunnattur	Kanchipuram	1955-58	Megalithic Habitational
59	Arikkamedu	Pondicherry	1941 1945 1989-92	
60	Kanchipuram	Kanchipuram	1953 1962-63 1970-71 1977	Medieval
61	Karaikadu	Cuddalore	1966-67	Historic
62	Sengamedu	Villupuram	1952-53	Historic
63	Nanganallur	Chennai	1973-74	Medieval
64	Ukkirankottai	Tirunelveli		Historic
65	Dharasuram	Thanjavur	1986	Medieval
66	Palayakayal	Tuticorin		Historic
67	Samayapuram	Trichy	1904-05	Medieval

Sl. No.	Excavated site	District	Year	Nature of the site
68	Mamallapuram	Kanchipuram	1990-1991 1999-2000 2000-2001	Medieval
69	Saluvankuppam	Kanchipuram	2004-2005	Medieval
70	Gingee	Villupuram	2001-2002 2002-2003	Late Medieval
71	Sadras	Kanchipuram	2002-2003	Modern

b. Archaeological Excavations Conducted By The State Department of Archaeology - 27 Sites

1	Mangudi	Tirunelveli	2001-02	Microlithic
2	Tiruthangal	Virudhunagar	1994-1995	Microlithic
3	Modur	Dharmapuri	2004-05	Neolithic
4	Anaimalai	Coimbatore	1969	Megalithic
5	Kovalanpottal	Madurai	1980	Megalithic
6	Kodumanal	Erode	1992-1993, 1996-1997	Megalithic & Historie
7	Karur	Karur	1973-1979 1995-1996	Historic
8	Thondi	Ramanathapuram	1980	Historic
9	Panayakulam	Dharmapuri	1979-1980	Historic
10	Vasavasamudram	Kanchipuram	1969-1970	Historic
11	Alagankulam	Ramanathapuram	1986-1987, 1990-1991 1992-1993, 1994-1995, 1996-1997, 1997-1998	Historic
12	Korkai	Tuticorin	1968-1969	Historic
13	Tirukkoilur	Villupuram	1992-1993	Historic
14	Terirruveli	Ramanathapuram	1999-2000	Historic
15	Poompuhar	Nagapattinam	1994-95, 1997-1998	Historic
16	Maligaimedu	Cuddalore	1999-2000	Historic

Sl. No.	Excavated site	District	Year	Nature of s
17	Perur	Coimbatore	2001-02	Historic
18	Andipatti	Tiruvannamalai	2004-05	Historic
19	Pallavamedu	Kanchipuram	1970-1971	Medieval
20	Boluvampatti	Coimbatore	1979-1980 1980-1981	Medieval
21	Kurumban medu	Thanjavur	1984	Medieval
22	Gangaikonda cholapuram	Perambalur	1980-1981, 1986-1987	Medieval
23	Palayarai	Thanjavur	1984	Medieval
24	Kannanur	Tiruchirappalli	1982-1983, 1983-1984	Medieval
25	Padavedu	Tiruvannamalai	1992-1993	Medievel
26	Sendamangalam	Villupuram	1992-1993, 1994-1995	Medieval
27	Panchalankurichi	Tirunelveli	1968-1969	Modern

c. University of Madras - 16 Sites

Ancient History And Archaeology Department

1	Mallappadi	Dharmapuri	1981-82	Neolithic / Megalithic
2	Guttur	Dharmapuri	1983	Neolithic Megalithic
3	Appukallu	Vellore	1977	Megalithic
4	Kallerimalai	Vellore	1979	Megalithic
5	Tiruvakkarai	Villupuram	1985	Megalithic
6	Tirukampuliyur	Karur	1962-63	Historic
7	Alagarai	Tiruchirappalli	1964	Historic
8	Uraiyur	Tiruchirappalli	1965-69	Historic
9	Kanchipuram	Kanchipuram	1970-76	Historic
10	Ādiyamankottai	Dharmapuri	1981-82	Historic
11	Tiruvamattur	Villupuram	1987	Historic

Sl. No.	Excavated site	District	Year	Nature of site
12	Kudikadu	Guddalore	1989	Historic
13	Arikkamedu	Pondicherry	1991-93	Historic
14	Tiruverkadu	Tiruvallur	1996-2000	Historic
15	Palur	Kanchipuram	2001-2005	Historic
16	Padavedu	Vellore	1994	Medieval (in association with State Department of Archaeology)

d. Tamil University - 5 Sites

1	Mayiladumparai	Krishnagiri	2003	Microlithic, Neolithic and Megalithic
2	Kodumanal	Erode	1985-86, 1989-90, 1997	Megalithic & Historical Site
3	Thandikudi	Dindugal	2004	Megalithic
4	Vallam	Thanjavur	1984	Historic Period
5	Periyapattinam	Ramanathapuram	1987	Medieval-[Chinese Contact]

e. Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (Deemed University) Enathur, Kanchipuram

1	Enathur	Kanchipuram	1999-2000	Historic

f. Other Agencies

Sl. No.	Name of the Institution	Excavated site/ District	Year	Nature of site
1	Sharma Centre For Heritage Education (Dr. Shanti Pappu)	Attiramapkkam Tiruvallur	1998-99	Palaeolithic
2	University of Kerala, Tiruvananthapuram (Dr. A. Rajendran)	Bommayarpalayam Villupuram	1999-2000	Microlithic

g. Period - wise Classification of the Excavated Sites

PALAEOLITHIC AGE	-	6
MICROLITHIC AGE	-	5
NEOLITHIC AGE	-	8
IRON AGE (MEGALITHIC)	-	53
HISTORICAL PERIOD	-	28
MEDIEVAL PERIOD	-	19
MODERN PERIOD	-	3
TOTAL	-	122

PART I

III. Period wise Classification of Excavations

Geology:

A major part of Tamil Nadu consists of an assemblage of crystalline rocks of Archean metamorphic complex. The Archaean rocks were formed during the very early period when there was no life on earth. They are mostly of igneous origin comprising metamorphosed granite and basaltic rocks together with a subordinate amount of sediments, They mostly consist of Archaeaa gneisses, schist and charnockites.

There are marine Cretaceons deposits near the coast at Ariyalur, Tiruchirrapalii and Uttatur.. These lie on a platform of granite gneisses anc charnokite and are fringed along the western margin by thin strip of rcck of Upper Gondwana age. The other notable geological formation found in the state is Cuddalore sand-stone series belonging to Tertiary beds which bear plant fossils. One of the important Wood fossils (long trunk) of a coniferous forest of this age is found exposed near Thiruvakkarai. Parts of the Teritory beds are covered by laterite. Besides this, the occurences of Upper Gondwana formation are also noticed near Sriperumbudur and Satyavedu. These are eomposed mainly of white to pink clays, shale and feldspathlc sandstones.

However, the presence of Pleistocene deposits is very limited in Tamil Nadu. It is mainly traced in the Kortallayar river basin of Tiruvallur district. The occurence of Plcistocene deposits is found overlying the conglomerates of Sathyzvedu, in the Valley of Kortal-layar River. Besides this, the exposure of Pleistocene boulder conglomerates yielding Old Stone Age tools, over lying the upper Gondwana are noticed ncar Vadamadurai and Attirampakkam. The detrial laterite over lying the boulder conglomerate also yield Acheuliau type of tools. It is to be noted that the formation of existing laterite deposit in most parts of India might be formed during Pleistocene, as there is no definite criteria for determining the date of the laterite.

a) Palaeolithic Culture in the Kortallayar and Araniyar Basin

The history of Chennai as most of us know started from the time the British established their trading company here, but

astonishingly Chennai (Madras) has been a place of habitation for Pre-historic hominids who had lived here millions of years ago. The chain of exploration started off when Sir Robert Bruce Foote, a British Geologist, accidentally found a stone tool at Pallavaram in May 1863, followed by the discovery of enormous number of artefacts in and around Poondi near Chennai. This tremendous discovery in the field of Pre-historic archaeology pushed back the antiquity of man in Tamil Nadu to more than half a million years ago and placed this region indisputably on the world map of Pre-historic culture.

Most of the stone implements have so far been collected from the surface of the earth but some are from the terraces of rivers. These early stone implements have been discovered at Kortallayar Valley in and around Thiruvallur.

The Madras hand axe industy occupies a very important place in the history of Indian Palaeolithic Archaeology. There are more than 120 Palaeolithic sites in the Kortallayar (old Palar) and Araniyar basin, comprising both rock shelters and open-air sites These include the well known sites of Gudiyam caves, Attirampakkam, Poondi, Vadamadurai and others. They have yielded several Palaeolithic artefacts which are of immense importance in Indian Palaeolithic research, Systematic Palaeolithic studies in this region indicate that these sites point to extensive movement of early hominids across the landscape for over 5,00,000 years.

Robert Bruce Foote and his assistant William king undertook furious survey in the Kortallayar and Araniyar basin, discovered the Gudiyum caves and the river terrace with abundant Palaeolithic tools at Attiramppakkam. Foot then also picked up a fossilized human tibia with both ends broken amidst the numerous Palaeoliths in Attiramppakkam. Their intensive survey revealed the location of serval Palaeolithic sites in this region. There was a gap of two decades in the studies of Palaeolithic archaeology of Kortallayar region after the death of Foote in 1912.

Renewal of Research Work by other Eminent Scholars

Again, scholars had turned their attention towards Kortallayar basin in 1930; Cammiade and Burkitt elaborately studied the Manjankaranai river terrace and collected Palaeolithc tools. Subsequently,

scholars like V.D. Krishnaswamy (1938-47) T.T. Patterson (1939), and K.V. Soundararajan (1966) identified four fold terrace system in the Kortallayar basin and boulder conglomerate horizons at Vadamadurai. They also classified the two categories, laterites of Primary Pre-Pleistocene compact laterites and secondary Pleistocene laterites. V.D. Krishnswamy also sorted out the tools on the basis of their Patination, rolling and refinement in technology and correlated them with African traditions. A notable contribution by these scholars resulted in the recognition of a different tradition, popularly known as 'Madras hand axe tradition', from that of the Sohan tradition of North western India. A. Swamy (1976) of Madras University discovered new sites and identified the tools collected by him into three ages. Viz; Early, Middle and Late Stone Age. The technological aspects of the tools collected from Gudiyam and Vadamadurai were analysed by Vidula Jayaswal (1978) in detail.

Excavations

K.D. Banerjee of the Pre-historic branch of Archaeological Survey of India in the years 1957 to 1979 conducted excavations at Gudiyam, Attirampakkam, Vadamadurai, Poondi and Neyveli. These excavations led to a contradiction of the work of previous scholars. Banerjee denied the existence of fluvial terraces and put forward a hypothesis of marine terraces. He also questioned the existence of a pre-lateritic industry and hypothesized that tools on the surface of the shale could have been derived from the overlying horizons at Attirampakkam and believed that the laterites at this site were the horizon for a post-Acheulian flake industry. He further thought that the early Acheulian at Vadamadurai, in the Boulder-Conglomerate was possibly reworked from elsewhere.

Subsequently, Dr. Shanthi pappu of Sharma Centre for heritage education, Pune, undertook systematic excavations at Attirampakkam to establish the nature of hominid activities at the site, environmental context of the site and the age of the assemblages, The excavations (1999-2004) revealed the lower, middle and upper Palaeolithic cultures spanning more than 5,00,000 years of occupation. Thousands of tools of Lower Palaeolithic Acheulian hominids were found deeply buried within beds of laminated clay, indicating a possible lagoonal or swampy environment close to the palaeo-Kortallayar. Below the clay beds, tools were also found in sandy

clayey deposits, indicating a possible nearshore environment. At the depth of 3.6 m below the surface, an Acheulian living floor was exposed, with large boulder cores, artefacts and debit age in association with a set of animal foot prints, the first of their kind to be documented in South Asia. These comprise a set of 17 round impressions (diameter of 15-20 cm) and a set of hoof-prints, which are under study. The discovery of three fossil teeth is significant, as fossils are rare at Indian Lower, Middle Palaealithic sites. These include an upper molar of a water buffalo, a lower molar of a horse and a left lower molar of a nilgai. These indicate at least three different fossil species suggestive of an open and wet landscape.

Striking survey by the Tamilnadu State Department of Archaeology

The Tamil Nadu State Department of Archaeology undertook systematic archaeological investigations and located serveral new Palaeolithic sites in this region. Among these, Parikulam which is situated on the western bank of Kortallayar, is notable as it reveals all types of Acheulian tools. There is a mound which was formed by the outliers of the Allikulli hills. This site is proposed to be excavated by our department in the current financial year (2005-06)

Under my instructions, an intensive field survey is being presently conducted by a team, consisting of two Archaeologists and a Geologist, in the Palaeolithic sites of Kortallayar region The objective is to record their original archaeological importance and to make a comparative study for correalating their Geomorphic setting and the tools types with each other. This survey yielded a portiod of a wood fossil embedded with fossilized bone pieces at its back from a bed of a stream near the village of Mettupalayam. At the time of inspection of the survey work, I had collected one more fossil piece from the same place. These fossil portions have been sent to the Tamilnadu State Geology Department for further investigations. It is a remarkable find as the occurrence of fossils is very rare in this region.

From the above narration, I am sure you will agree with me that Kortallayar basin was the cradle of mankind in South India. It is proved by the recent excavation at Attirampakkam which clearly demarcated the oldest date of the lower palaeolithic of this region

to 5,00,000 years. The intensive researches so far conducted in this region by several scholars reveal that the ancient hominids might have migrated from here to other parts of Peninsular India.

To focus the pre-history of Tamil Nadu as a whole and the Palaeolithic age of this region in particular. the State Department of Archaeology has established a site museum at Poondi in 1985 for the benefit of the public, students and scholars. This museum is a unique one as it features the pre-historic heritage of Tamil Nadu. It is the only site museum in India, which portraits the palaeolithic culture of the region.

b. Mesolithic (Microlithic) Culture

The late Stone Age or microlithic age succeeded the middle stone age. An important feature of this culture was the extensive use of microliths.

In Tamil Nadu large number of sites have been reported in the region around Tirunelveli, Madurai and Ramanathapuram districts. Many major sites of this culture are found to the South and North of Tamiraparani River. Microlithic tools were first reported by Bruce Foot in this area and Aiyappan wrote about some of the tools from Sawyerpuram. Allchin and Zeuner wrote elaborately about typology of the tools and gave an interesting picture of the climatic and geographical conditions of the area. Excavation have been carried out at following sites; Attiirambakkam, Mangudi, Tiruthangal, T. Kallupatti Mayiladumparai, Dailamalai, Togarapalli and Mullikadu.

Teri

The low-lying lagoons were filled with sand and sand dunes were formed due to the wind. Afterwards due to climatic change intensive weathering occurred. This cemented the sand dunes and turned them reddish. They are known as 'Teri sites' because they are associated with fossil red sand dunes locally called 'Teris'. In this way three terraces were formed at the height of 23 feet, 50 feet and 100 feet above the present sea level.

Tool Types

Two stages of Teri industry is noticed, one early and the other later, which can be distinguished on typical analysis.

Meygnanapuram collection was the earliest collection in Sawyerpuram area.

1 An industry represented by flake and core tools. These tools are highly stained.

2. Besides the former, blades, geometric tools are collected. These tools are slightly stained.

The common tool types are Blades, Scrapers, Discoid, Points, Lunates and chopping tools. All the tools show varying degrees of retouch, pressure flaking and use marks. The industry has been tentatively dated to 4000 BCE on the typological basis and also on the study of the sand dunes.

The late Stone Age industry is mostly made of flakes with unifaceted low angled platform and occasionally on cores. Retouching secondary working is confined to margins only. The materials used for manufacturing tools in quartz. However crystal and chalcedony are also used occasionally, I shall now elaborate some of the salient features of the following significant excavations

Mayiladumparai

The excavation at Mayiladumparai exposed one-meter deposit of microlithic blades, lunates and points In addition to this several animal bones were also obtained. Pottery was absent in the deposit. This is the first microlithic site so far reported in Dharmapuri region.

Mangudi

The Archaeological excavation was conducted at Mangudi in Tirunelveli district by the State department of Archaeology in the year 2003 The excavation brought to light several microlithic tools. This was the earliest cultural deposit found in the trenches. The occurrences of microliths in the stratified layers were very clear at Mangudi. A sterile layer below the megalithic cultural phase was also noticed. Under this sterile layer the microliths were found From this it can be assumed that after he microlithic phase the area was not occupied, and later on the megalithic people occupied this area. The microlithic tools are also found in nearby villages namely Arugankulam, Puttur, Cholapuram and Thenmalai.

Though the Mesolithic (Microlithic) period artefacts were discovered at far south in the Teri sites of Tirunelveli during exploration it is for the first time that Mesolithic stone tools were found in the excavations at Tiruthangal and Mangudi by our department.

Date

The chronology of the microlithic culture in South India is not yet settled. However, the available evidence from Sawyerpuram dates it to 4000 BCE The stratigraphical position at Attitrampakkam suggested that the microlithic culture was in fact a continuation of the middle stone age.

c. Neolithic Culture of Tamil Nadu

In the cultural history of mankind the Neolithic age marks the concluding phase of the stone tools culture. The Neolithic age is characterized by the introduction of more evolved and developed typo-technological features. Man transformed from "food gathering stage to food producing stage".

A characteristic of this age is evolution of grinding and Polishing of stones after they were fashioned by the usual flaking techniques. As a result the worked tool was usually smooth having rounded edges.

The salient features of Neolithic culture are settled life or sedentary settlements in villages, domestication of animals, domestication of plants and manufacture of pottery and ground stone tools. So Scholars called this the Neolithic Revolution.

Districts like Salem, Dharmapuri and Vellore endowed with castellated hills and natural caverns which were an ideal region for habitation of Neolithic people.

Investigation on the top of hills such as Shevroy, Vattalmalai, Kalrayan and Javadi hills has yielded number of Neolithic tools of pecked and ground stone industry along with microlithic tools comparable to the late Stone Age tools. But there is no habitation site with pottery or any other indications found on the top of the hills.

Some of the important Neolithic habitation sites in Tamil Nadu like Paiyampalli, Chandrapuram, Gollapalli, Toggarapalli. Pannimaduvu,

Dailamalai, Mullikadu, Kappalavadi and Bargur in this region, show evidences of Neolithic culture.

The archaeological excavations at Paiyampalli, Mayiladumparai and Modur have thrown more light on the study of Neolithic culture of Tamil Nadu.

Paiyampalli

The excavations at Paiyampalli by Archaeological Survey of India show a clear distinct feature of Neolithic and Megalithic cultures. During that time peope lived in pit dwellings, cut into the natural soil. These pits being oval, circular etc, had super structures of perishable materials as evidenced by post holes along the periphery. The excavation also shows some distinct developments in the mode of man's life constituting the Neolithic stage, the technique of preparing ground and polished stone axes and the association of microliths with the Neolithic culture.

Mayiladumparai

The excavation at Mayiladumparai conducted by the Tamil University yielded a deposit of Neolithic appendage dated 3000-1000 BCE, with hand made red ware pot sherds. The findings show the smooth transformation from the Microlithic through Neolithic to Megalithic culture in this region.

Excavation at Modur

The State Department of Archaeology conducted systematic excavation at Modur hillock in Dharmapuri district during 2004-2005. The excavation yielded number of stone objects like spheroid rubbers, oval shaped discoids, pestles, discoids, grooved hammers and different type of grinders. More than 500 stone objects were found. For the first time 11 Neolithic celts were unearthed in the stratigraphical layers. Most of the tools were obtained in the Pre Megalithic levels. It is noteworthy that many tools of similar types were also obtained in Piklihal, T.Narasipur and Paiyampalli.

The excavation carried out at Modur, a Neolithic settlement yielded large number of new Stone Age artifacts. This has to some extent solved the Neolithic problem in Tamil Nadu.

Chalcolithic Epoch

The Chalcolithic period also known as Copper - Bronze Age succeeds the Neolithic period in the evolution of cultures. In the Deccan, traces of Chalcolithic culture are abundantly found in Jorwe, Malwa and Inamgaon. However, the excavations at Neolithic sites in Tamil Nadu have not yielded copper or bronze objects in any significant manner. This leads to the conclusion that in Tamil Nadu the Iron Age succeeded the Neolithic period bypassing the Chalcolithic age Why did this happen? This is an area which is open for further research.

d) Iron Age (Megalithic)

Of the nearly 120 sites excavated so far more than 50·/. (63) belong to the Iron Age. The exploration and exeavation carried out in the northern parts of Tamil Nadu particularly in the river valleys of Palar, Pennaiyar, Kaveri, Vaigai and Tamiraparani yielded clear evidence for studying the iron age of Tamil Nadu.

Almost all parts of Tamil Nadu have revealed the existence of megalithic burials of different types such as Dolmenoid cist, slab cist cairn circles, menhirs, burrows, urns and sarcophagus etc., The megalithic types in northern parts of Tamil Nadu (comprising the districts of Tiruvallur, Kanchipuram, Vellore, Villupuram, Tiruvanamalai etc.,) shows mainly the slab cist burials. At Amirthamangalam, Urns with tapering bottom occurred within cairn circles, whereas slab cist within cairn circle were noticed at Sanur, Perumbair etc., Sarcophagus were noticed within the cairn circle at Tiruttani and Tirumangalam Kandigai. In the western part of Tamil Nadu comprising the districts of Coimbatore, Nilgiris, Salem, Dharmapuri and Erode we have Dolmenoid cists, menhir, and slab cist within the cairn circle. Some urn burials are also noticed in this region. The southern most part of Tamil Nadu such as Tirunelveli, Madurai and Ramanathapuram yielded mostly Urn burials,

The megalithic burials at Mottur in Tiruvannamalai district and Udyanatham in Villupuram district have anthropomorphic figures. Stray findings of megalithic burials were noticed in more than hundred sites in Tamil Nadu. Systematic excavations were conducted by different agencies in the following sites namely, Amirthamangalam, Sanur, Kunnathur, Kodumanal, Adichanallur, Kovalanpottal, Auroville

Sittannavasal, Mottur, Appukallu, Mallapadi, Kallerimalai etc., Though the megalithic burials are noted in several places in Tamil Nadu it is very hard to find the habitational deposits. However, only three excavations at Kunnathur, Kodumanal, and Mallapadi have yielded habitational deposits. The previous excavations done by Alexander Rea yielded nearly 4000 artefacts from Adichanallur. They include copper, iron and gold objects. On examination of the bones collected from the urn it was found that one type of bone belong to the group of Austroloid and the other Mediterranean. The recent excavation at Adichanallur also revealed the habitational layers of the megalithic age.

Kodumanal

The Tamil Nadu State Department of Archaeology in collaboration with the Tamil University, Thanjavur conducted excavations at Kodumanal situated in Perundurai taluk in Erode District.

The excavation had brought to light two cultural periods viz:

1. Megalithic period and
2. The early Historic period

Black and red ware, black slipped ware, russet coated ware and red slipped ware were found in the excavation. Apart form these, beads made of quartz and clay, inscribed pot-sherds and graffiti pot-sherds were unearthed.

A megalithic cairn circle at this site was also excavated. The grave goods such as lids, bowls, dishes, four legged jars and ring stands were found placed outside the primary cist. At the south eastern side of this primary cist an urn was found which surprisingly yielded 782 beads made of carnelian. An iron sword measuring 169 cms. length was also found at the eastern side of the main cist. Besides, four iron swords, a copper toddy filter with lotus and peacock designs, double edged axe, small daggers, stirrup like object, potsherds bearing graffiti were also gathered.

Kovalanpottal

Kovalanpottal is situated at Pazhanganatham, a hamlet of Madakulam Village in south Madurai circle in the Madurai District. A tradition says that Silapathikaram hero Kovalan's decapitation took

place here. To probe into the antiquarian value of this spot, in the year 1980 excavations were conducted.

In trench no. 1. the most significant among the findings were the three layer urns. One urn was thrown open, and inside were found a skull, the bones of human beings and potteries. A square copper coin carrying the figure of a fish on one side was also found at 45 cm depth.

Adichanallur

Adichanallur is a famous urn-burial site, located on the bank of river Tamiraparani in Thoothukkudi district. This site was excavated by Alexander Rea, (in 1899-1906) M. Louis Lapicque of Paris University (in 1903-04) and Anderson (in the year 1914).

Again the site was excavated by Archaeological survey of India in the year 2004-05 and exposed more than 150 urns and located a habitation site near the burial site. An important find is a sherd with beautiful applique design outside. The series of motif show a tall majestic looking woman, a swathe of standing paddy next to her, a crane, a deer, a crocodile and a lizard These motifs resemble pre-historic paintings found in central Tamil Nadu and shows some interlink with each other. Inside the urns copper bangles human skeleton, grāve pots, paddy and husk. Outside the urn ritual pots, Iron dagger, spearhead, Iron Implements and Neolithic celts. The excavation revealed the method of burying urns in three tier system. Earliest generation buried the dead in urns at a depth of 10 feet by cutting a rocky area. Next two generations buried the dead above in two tiers. The urns have garland like decoration in the neck portion of urns.

A habitation site was also locatcd nearby the burial site. The excavation revealed potter's kiln with ash, charcoal and broken pots. Artefacts like Iron knife, carnelian beads, terracotta beads and bone implements were also collected from this site. The date of the site is fixed by Preliminary Thermo luminescence dating to 1500 BCE to 500 BCE.

The Cultural Aspects

The main aspect of this culture is the discovery of Iron and its wide usage. The Iron Age people used iron implements for hunting, warfare and for agriculture. The people knew the art of

wheel-made pottery which is an important aspect of this period. The religious ideas developed in this period, which was reflected in the mode of burials and the belief in life after death This period also saw the development of script from graffiti marks and Brahmi script occurred in the potsherds collected from the excavations The megalithic people lived in groups and led a well-settled life. Conflicts between groups occurred frequently. Cattle were the main reason for the conflicts as these people considered them as their wealth. So the conflicts occurred whenever the othe. group confiscated the cattle.

Rock Art of Tamilnadu

Rock art is a term used to denote artistic expressions on rock media such as bare surface of caves, rock shelters and boulders. They appear in several forms such as painting, etching, engraving, bruising etc. The early cave man was a nomadic hunter-gatherer, whose life was inextricably linked to his physical and natural euvironment. What he saw he reduced to painting in the caverns inhabited by him.

It was widely believed that Tamil Nadu had no rock art of any significance. But, this was till a few decades ago. In the late seventies Prof. K.V. Raman chanced upon rock engravings in Mallapadi in Dhamapuri District, thereby flagging off the race for identifying new sites; and the effort has not been in vain. Till date, more than thirty sites along the Western and Eastern Ghats have been identified, many of them by officers of the State Department of Archaeology. This has conclusively proven the existence of cavemen who inhabited the rocky shelters of Tamil Nadu in the Iron age (megalithic period). It has also established the State's claim to be considered as one of the important regions for studying and interpreting rock art. Places where the rock arts are found:- Kilvalai, Settavarai, Alambadi, Padiyandal, Kollur, Nayanaur, (Villupuram district), Mallapadi, Maharajakadai, Mallasamudaram (Dharmapuri district), Tirumalai, (Sivaganga district), Sirumalai, (Dindukal district), Vettaikkaranmalai. (Coimbatore district).

The dating of the rock paintings is everywhere a complex problem and it is so even in the Indian situation. The paintings are on the surface and no technique is at present available for dating them directly. So far no fragment of rock paintings has been found buried in an Archaeological layer at any site. Therefore we have to depend on

indirect aud circumstantial evidence to date the paintings. In Tamil Nadu the Neolithic period is assigned to 4000 BCE-1000BCE while the megalithic period is dated to 1000 BCE to 500 CE. The Tamil Nadu rock paintings have been found close to these sites, which have Neolithlc and megalithic cultural traits. The Neolithic people began the painting tradition and it continued during the megalithic and historic period, when the rock shelters were abandoned and the people started living in settled life. The occurrence of megalithic burials, typical black and red ware potteries, and the paintings of the horses show that they were bearers of Iron Age culture, around 1000 BCE to 500 CE.

The study of rock paintings is more a field of scientific approach to systematise the social, cultural and historical phases of human behaviour and his initiation into the ritualistic and religious beliefs.

The rock paintings are earliest evidence of regular art activity in Tamil Nadu. They also tell us the contemporary animal life, which is otherwise inadequately known because of the paucity of the skeletal remains. The gradual and intellectual development of art and civilised living was then progressing into the historical time. It is clear that dancing had the central role in communal life of those people. They danced in circles for fear of the wild animals, or for ritualistic and communal co-operation. Dancing could have served as a means of inducing disciplined common effort in capturing large animals. The later paintings of settled life showed the conflict between two different groups of men as noticed at Mallappadi and Vettaikkaranmalai. The Neolithic paintings at Settavarai, Alambadi and Kollur show skins of animals left to dry, which indicate that the man had acquired the art of tanning skins for clothing and shelter. At Alambadi the painting of men wearing masks of birds or animals or human beings, might have established the influence of ritualistic belief. The masked dances are an integral part of Indian culture in rustic and tribal living even taday.

Among the rock paintings so far discovered, only in Kilvalai some signs similar to Harappan symbol are found. The occurrence of four men rowing a boat and a big sign before them indicate the direction by which they had to travel. Such transport indicates the migration of people to other places. It is interesting to note that in places like Kilvalai, Maharajakkadai and Mallachandiram the

symbols and markings observed on the rocks show features similar to graffiti found in the megalithic period pot sherds. Probably the paintings have more convergence to the megalithic period. Investigations on the above interesting finds can be thoroughly undertaken in the near future.

Conclusion

In Palaeolithic period man led a nomadic life and his main occupation was *food gathering.* In the Neolithic period he became a *food producer* and lived in small settlements. He invented pottery making, began to domesticate animals and used them for agriculture operations. He lived in thatched huts and pit dwellings In this period Neolithic people began to dispose the dead bodies by burying them near their dwellings. The megalithic people advanced rapidly. Their main achievement was the invention of Iron. They followed a well-developed system for disposing the dead bodies. They respected and worshipped the deceased. So they built big monuments by using massive stones for their burials. Pottery making by wheel, smelting of iron and using it for making implements for various purposes show their technological advancement. So the megalithic age paved the way for a new beginning, of a developed and civilzed life of mankind.

PART II

f. Early Historic Period (300 BCE - 500 CE)

As far as the cultural heritage of the historical period is concerned lot of materials have come to light from excavations undertaken at historical sites. Of the sites excavated so far Arikkamedu in Pondicherry state; Poompuhar, Alagankulam, Korkai, Karur, Uraiyur, Vasavasamudram, Kodumanal and Kanchipuram in Tamil Nadu state are the most significant sites, which have yielded enormous artifacts on the cultural aspects of early historical period of Tamil Nadu.

Arikkamedu

Arikkamedu was the land mark excavation which confirmed trade links between South India and Roman Empire. The excavation revealed a rectangular shaped godown and a granary in the northern side of the mound were unearthed at Arikkamedu. These buildings have large walls built of well baked bricks with clay as the binding material. The external sides of the walls are covered with lime plaster. Foundation wall goes upto one and a half meter deep.

In the southern side of the mound two dyeing tubs measuring 3 x 4 meter square were exposed. These are also built of bricks and the floors of them are also laid out with bricks.

In addition to the above structures a number of ring wells had also been unearthed.

Considerable quantities of imported potsherds such as Arretine, Amphorae and Rouletted wares were unearthed. Some of the amphorae have handles on either side, and the Arretine pieces bear the manufacturers' seals. A variety of pot known as Terra Siglieta has also been collected during recent excavation from this site.

Terracotta images, beads made of semi precious stones, conch and fired clay and inscribed potsherds are the other important artifacts of this site.

Uraiyur

At this site 21 postholes were exposed in the trench. These postholes are believed to have been used for some religious purpose most probably for performing sacrifice (Yagna).

A dyeing tub was also unearthed from another trench. One part of it was in square while the other part was in rectangular shape. The exposed structure consisted of seven courses of bricks 17×3 inches.

A considerable number of inscribed potsherds bearing Tamil character were unearthed .The letters of these sherds seem to have been engraved by a nail after firing. Besides a few sherds with graffiti was also collected.

The habitation at this site was not continuous as the river Kaveri appears to have flooded the town often.

Terracotta images, beads of different material, bangle pieces of glass, terracotta and conch, gamesman, ear lobes, smoking pipes, spindle whorl are the other important findings of this site.

Kanchipuram

This site seems to be the best of all in supplying artifacts from the Pallava period to Vijayanagar period continously.

It had yielded rouletted and an amphorae potsherd of Roman origin along with 59 conical jars of indigenous origin. A copper coin of Satavahana king Rudhra Satakarni, a lead coin bearing the figure of Lakshmi with archaic Tamil legend and a copper coin with Ujjain symbol probably of Satavahana and a coin of Rajaraja were also unearthed.

Beads made of copper, coral, glass and semi precious stone, a comb of shell and a terracotta elephant head have also been collected

A structure believed to be the Buddha Vihar and the circular foundation of stupa were exposed here. Below this structure a grey ware sherd engraved with archaic Tamil inscription reading 'Putalatisa' which may indicate the name of a Buddhist monk had also been brought to light.

The most outstanding discovery of this site are the 11 terracotta coin moulds of which two are of punch marked coins, five are of Satavahana coins, three are of Pallava period and the last one may also be a Pallava coin.

Tirukkampuliyur & Alagarai

A wall built of sun-dried bricks having seven courses assignable to medieval period was exposed. In addition to this wall the flooring was also noticed.

In another trench two walls build of sun-dried bricks were unearthed. This structure appears to have been built for storing grains.

Beads of semi precious stones, glass bangles, shell bangles, objects of bone, copper rings. iron objects and terracotta images are the other important artefacts of this site. Of the terracotta images Mother Goddess, Phallus with Naga, torso of a male, head of a male, mother and child, Ganesa and its mound mouse are the significant findings.

Potteries of this site especially russet coated potteries are worth mentioning. Graffiti sherds bearing symbols of trisul, star, bow and arrow, ladder. plant, flower, leaf, bitriangle, wavy lines and Ujjain symbol are very interesting for comparative study.

Thus the above sites have supplied immense material for understanding the cultural heritage of Tamilnadu. However these archaeological materials are to be analysed in detail to know the different aspects such as domestic life, industries, trade contact with other countries, social life, sports, religious life etc. of those periods,

Korkai

Korkai is a small village in Srivaikuntam Taluk of Thooththukkudi district. It is situated at a distance of 3 Kms to the north of the river Tamaraparani. The sea originally had receded about 6 kms to the east. The river Tamaraparani skirted this town in ancient days. The site is referred to in Tamil Sangam literature and has attracted the notices of the classical geographers as an important port of pearl fishery. In the excavation, a structure with

nine courses of bricks in six rows was unearthed at the depth of 75 cm's from surface level. Below the stucture three large sized rings placed one over the other and used as soakage were found. Inscribed. potsherds bearing Tamil Brahmi letters assignable, to 300 BCE to 200 CE were also found. Charcoal samples were collected which were assigned to 785 BCE by the Tata institute of fundamental research, Mumbai.

Karur

Karur is situated about 70 kms. from Trichy town and it is a district headquarters. There are different views among scholars about Karuvur - Vanci, the capital of Sangam Cheras. The excavation results have thrown valuable light on the identification of this place Karur as - Vanci.

These excavations revealed a house-site with a brick flooring and a drain joining to a brick structure. The important findings are several potsherds with Tamil-Brahmi inscriptions assignable to the beginning of the Common Era. The inscribed potsherds were found along with Roman Amphorae and Rouletted ware of Mediterranean origin. One Roman coin was also unearthed in the excavation.

Alagankulam

Alagankulam is a village situated on the east coast in Ramanathapuram Taluk and District. The village is situated on the banks of the river Vaigai and is about three kilometers away from the sea-shore.

The most significant findings of the excavation are hundreds of potsherds, of the Mediterranean region. They include Arretine ware, Rouletted ware and Amphore jar pieces. The Arretine ware is a reddish ware made of clay and it belongs to the imperial Roman world. Pieces of red ware with Tamil Brahmi letters have been found. They are assignable to the first century BCE. Other antiquities include beads, perforated tiles, and bricks in various levels. Three Roman coins were unearthed. They contain the figure of the head of the Roman Emperor on one side and the figure of victory, holding a globe on the other side. The legend on them shows that the coins were issued by the Roman Emperor Valentine II who ruled around 375 CE.

Poompuhar

Poompuhar, situated at the confluence of river Cauvery with the sea, was a flourishing port city and the second capital of the Cholas in the Sangam period. It is situated in Sirkazhi Taluk of Nagappattinam District. Department of Archaeology conducted excavation at Kizharveli and Dharmakulam areas. The Kizharveli excavation revealed two brick walls, running North east-South west at a depth of 20 cms. Soft clay had been used as binding material. These two brick walls, were placed wide apart and provided with platforms, the intention being that there should be free movement of water. Four wooden poles were found to have been made of the palmyra tree trunk and the other two made of iluppai tree trunk (bassia longifolia). This structure seems to have served as a wharf in the 4th century CE.

Under water exploration work was also conducted at Poompuhar in the year 1996-97 in collaboration with National Institute of Oceanography, Goa. Lead ingots were obtained in the search.

Andipatti

The excavation was carried out at two habitation mounds locally known as Nattamedu & Saambalkadu and twelve trenches were laid bare. Two stratigraphical layers with average depth of 1.50 mts were noticed. The site yielded potsherds of megalithic and historic period i.e. black and red ware potsherds and coarse red ware sherds. On the basis of unearthed antiquities such as terracotta objects, and figurines of 6th to 12th century CE, it is understood that this site had been continuously inhabited since 1st Century CE till 12th Century CE. Two cultural periods are demarcated from the unearthed antiquities. I-Period (1st BCE to 5th CE) is characterized by the yielding of inscribed potsherds, graffiti potsherds and grooved tiles II-Period (6th CE to 12th CE) is characterized by the presence of spindle whorls, hip-hops, shell bangle pieces and terracotta figurines.

The remarkable findings include inscribed potsherds, graffiti potsherds, and terracotta figurines of mother goddesses. The inscription reads as; 1. *atta*, 2. *Kuma* & 3. . . . . *Iganathila*. The discovery of spindle whorls and iron objects proves the fact that this site was once existed as a flourishing center for weaving and iron smelting industries. The other antiquities includes, semiprecious stone beads, terracotta beads, shell

bangle pieces, terracotta ear lobes, grooved tiles, terracotta pipes for iron smelting, hip-hops,.iron objects such as knife and nails, copper objects, terracotta figurines and pottery like black and red ware, slipped ware and coarse red ware.

Conclusion

The rapid development of fully evolved script and language formed the basis of present day Dravidian languages. Advancement in art, architecture, rise of trade centers, establishment of industrial centers and commercial activities are some of the salient features of this period. The rise of powerful middle class and merchant communities gave rsie to the formation of large empires like the Pallava, Pandya and Chola dynasties. This period also saw the migration of people from one place to another.

Kalabharas

After the close of early historic period and dawn of Pallava and Pandya dynasties of 6th century CE, Tamil Nadu was enveloped in a long historical black out for a period of more than three centuries. This is what the historians call the Kalabhra interregnum. Most of the great literatures like the epics Silappadikaram, Manimekalai and eighteen minor works were written during this period. The Pulankurichi inscription is said to have been dated to 4th century CE on paleographical grounds. The king mentioned in this inscription has been identified by scholars as the Kalabhra ruler Chendan Kurran. Further archaeological excavations can solve this problem of identifying the Kalabhras and the cultural history of this period.

f. Medieval History - (900 CE - 1400 CE)

Tamil Nadu in the medieval period experienced similar cultural changes .which were noticed all over India. Construction of palaces by bricks and temples by using granites, urbanization of settlements by moving into townships, development in arts and crafts, trade and commerce, emergence of religious sects were the unique features of this period. It was the period of continuation and consolidation of the early historic period.

The emergence of coinags as a means of exchange and formation of merchant guilds paved the way for extensive trade and

cultural contacts. This period also saw a spurt in building activities; unbaked brick and subsequently burnt bricks were used for construction. The development of commercial contact with the Far eastern countries established the coastal Forts and saw the emergence of walled cities and all other aspects of urbanization. Art, architecture, trade contact with Far eastern countries, religious patronage and other cultural developments were exposed by the excavation.

As the major cities were mostly located in the river basins, excavations were conducted along the Palar, South Pennar (Ponniyar), Kaveri, Vaigai and Tamraparani river basins. Capital towns were also covered by exploration and excavations.

In the medieval period Thanjavur was an important center and capital of the Chola king Raja Raja-I. Archaeological excavations were conducted in the following places viz, Thanjavur, Kurumbanmedu, Palayarai, Gangaikondacholapuram, Kannanur, Padaiveedu, Pallavamedu, Maligaimedu and Sendamangalam. These excavations show the structural remains and other important cultural history of the Chola dynasty.

Mamallapuram

The excavation carried out by Archaeological Survey of India revealed and ovalish shaped structure with four courses aligned in North-South orientation. The ovalish structure was found to enclose a monolithic sculpture of Bhuvaraha near the southern apse and in the middle shrine with adhisthana portion carved in the bed rock and a structural superstructure and further north well cut into the sands all aligned in the north-south direction. The Bhuvaraha sculpture was carved out of the sand bed rock on which the image of reclining Vishnu has been carved between the two shrines of shore temple.

The pitha bears a single line inscription in the usual Pallava Grantha script - Srirajasimha, Srirangaraya, Sribhara and Srichitrakaramukha of Narasimhavarman II, Rajasimha CE 700-727.

The excavation conducted in the southern side of the shore temple revealed a part of jetty point extending towards the east and might have served as a launching point for small boats through a small inlet (back water) from the sea. The significant construction

methods adopted in the jetty, by a locking the veneering stones to prevent internal collapse. A brick structure was also exposed here with the size of bricks 32 x 18 x 6 cms coarse red ware pot, dish bowl of red ware; few pieces of conical jar (imitation of Amphorae) were also collected from this site.

The recent excavation conducted near shore temple exposed the garbhagriha (sanctum sanctorum) of a collapsed temple dated to 8th century CE. A slab with fragment of Pallava inscriptions "cika malla eti" is also found here. Other artifacts like a sculpture made of sand stone (Surya) a sitting lion sculpture and the carving of a human face etc were unearthed here. Terracotta ring well is also noticed in the northeastern corner of the exposed structure.

Saluvankuppam Excavation (near Mamallapuram)

The remains of a brick temple dating back to the late Sangam period (1st BCE to 2nd CE) have been discovered on the sea front near the tiger cave at Saluvankuppam near Mamallapuram. It is found beneath a Pallava temple dated to 8th century CE. The brick temple has 27 courses of bricks with a square garbhagriha (sanctum sanctorum) and the temple dedicated to God Muruga. The sanctum measures 2 mts by 2·2 mts and bricks measured 40 × 20 × 7 cms belong to Sangam age. After the brick temple collapsed the Pallava kings of the 8th and 9th CE. built another temple over it using granite slabs. The excavation also yielded two stone pillars with inscriptions of Pallava king Danthivarman 813 CE and Nandhivarman III (850 CE). The inscriptions mentioned gift of gold for a perpetual lamp to burn in Subramanya temple. This is the first time a Hindu brick temple of Sangam age was discovered in Tamil Nadu.

Kurumbanmedu (Thanjavur)

It is located in the western side about 3km from Brahadeeswarar Temple, Thanjavur. The imperial Cholas had Thanjavur as their capital and ruled and controlled entire Tamilnadu in the medieval period. The mound located in this area was intended to excavate to find out the ruined remains of the palace of imperial Cholas.

Two trenches were laid in this mound. During excavation medieval period antiquities like Iron nails, tiles, big bricks and terra-cotta lids, lamps and porcelain potsherds were collected. The

excavated antiquities showed some constructional activity and the trade contact with Fār Eastern countries. Similar roof tiles, Iron nails are also found at Gangaikondacholapuram.

Palayarai

Palayarai situated in the Kumbakonam taluk of Thanjavur District was the second capital of medieval Cholas. Once a flourishing city, now it is a small village with the name Kil-Palayarai. It is located about 7 Km south of Kumbakonam.

Exploration was undertaken at Nandanmedu and Cholan-maligai in the year 1964-65 and some Megalithic urns and brick structures of the Chola period were discovered by University of Madras.

To bring out the remains of the Chola palace, systematic excavations were undertaken at Kil-Palayarai in the year 1984.

Totally three trenches were laid on the plain surface of the mound. The excavation yielded coarse red ware, black ware, painted and decorated sherds, rectangular roofing tiles, terracotta lamps and spouted knobs were unearthed. Based on the occurrence of medieval potsherds and antiquities the date of the site is tentatively fixed to 12th century CE to 13th century CE. Iron nails, Bangle pieces, Terra-cotta figurines were also found. The above artifacts revealed the significant cultural phase of Chola Empire.

Gangaikonda Cholapuram

The eminent chola ruler Rajendra I, to commemorate his victorious march to Ganges, founded Gangaikonda Cholapuram the second capital city of the cholas. Thereafter it remained as the capital of Chola Kingdom for about 250 years. Today it is a world heritage site declared by UNESCO.

The excavated structural remains revealed that it was an extensive city carefully planned and laid in accordance with the architectural treaties to suit the needs of a capital. The city seems to have had two fortifications inner and the outer, The outer was probably wider and mentioned in the inscriptions as *Rajendra Cholan Madil*, named after the builder. The inner fortification was around

the royal palace probably identical with the *Utpadai Veetu Madli* mentioned in one of the inscriptions. Now the city has completely disappeared, except the foundations buried under the earth. There is a big mound called *Malaigai Medu* (Palace Mound) to mark the site of the old palace.

The surviving big temple called Gangaikondacholiswaram built along with the foundation of the town still attest to the past glory of the place. A few villages lying around the east of the temple bear names that recollect their association with the original layout of the city. They are *Ulkottai, Ayudakalam, Edikkattu, Kollapuram, Vira-cholapuram, Meykavalputtur, Vanavanallur and Jayankonda Cholapuram.*

Excavations

The excavations were carried out at Maligaimedu, Manmalai, Kalkulam and Cholagangam in the year 1980, 1981, 1985, 1987&1991. Totally 20 trenches were laid and in all trenches brick structures exposed at the depth of 1.65 mts. The thickness of the wall is 1.10 mts. They are built of well-burnt bricks using *Header and Stretcher* method. The upper portion of the brick structure has coated with 4 cm thick lime plaster. The binding medium is clay. On the foundation wall granite stone pillar base found embedded at equal distance of 1.70 mts. The stones were probably used to bear wooden pillars. In one of the trench a decayed wood was noticed naer the pillar base. The pillars were to carry the super structure of the building. Totally Twenty pillar bases were noticed measuring 65 Cm × 30 Cm × 30 Cm. This place might have served as a pillared hall. In this excavation large quantity of Iron nails measuring 3 Cm to 50 Cm in length were collected. The occurrence of clamp nail, clamp plate, iron plate with holes etc. It revealed that the super structure was made of wood interspersed with iron - nails.

Artefacts

Large number of roofing tiles and pieces in different types were collected from the excavations. A copper handle of a broken sword, considerable numbers of glass and conch bangle pieces with decorations, ivory objects, with decoration were also unearthed. Numbers of sand stone objects, broken red stone pieces with fine workmanship were also obtained.

The celadon ware with pale blue and green in colour were also unearthed from the trenches and it revealed that the Cholas had trade contact with China in 11th - 12th century CE. This excavation revealed that the secular architecture of the medieval period and well planned city of the great Chola dynasty.

Kannanur

Kannanur was the capital of Hoysala king in 13th century CE who ruled some parts of Tamilnadu and constructed Hoysalaeswara Temple. Only three trenches were laid. A sump well was noticed in this site at a depth of 2.30 mt from the surface level. The inner measures 50 m. X 50 m. The width of the sump well decreases gradually towards the bottom like tunnel and the total depth is 4.30 mt. This excavation yielded a large number of coarse red ware besides a few celadon wares. Large number of medieval roof tiles of various types was also unearthed from this site. This excavation revealed the cultural development and draining water with the help of sump well was the major finding of this place in this period

Padaivedu

Padaivedu in Tiruvannamalai district was the most important capital of Sambuvarayars. It is located in between Attimalai on the northwest, the Vallimalai on the northeast Kalyathu Kundu on the southeast and Sandavasal reserve forest on the south. So this city was surrounded by the natural fortification.

In Padaivedu nearly 16 trenches were laid. The cultural sequences of this site could be assigned as period I datable to 13th century CE to 14th century CE, which was characterized by the occurrence of the brick structure with the channels used for bringing drinking water and draining out sewage water and ring wells. The period II could be dated to 15th century CE to 17th century CE is marked by the presence of smoking pipes, Sultan coin and a number of decorated red ware sherds and bangle pieces. Four types of channels were noticed and built with extraordinary skill and care. The first type of channel is found built up of brick comparably in simple method. The second kind of channel is found built of granite blocks which appear to have been used for draining out of sewage water. The third type of channel is the most significant and very interesting channel. Both brick and granite stone was used for the constructing this channel and is airtight. The granite slabs are found

laid on the floor while the bricks have been used for constructing the other parts of the channel. This might have been used to supply drinking water for the royal family. The fourth type is formed with well designed terracotta pipes which are found placed one fitting the other, leaving no room for leakage and the joints were plastered with lime. The excavation at Padivedu is significance as it has brought into light the nature and style of the secular architecture of this period. Terracotta lamps, spouts, blowpipes, dice, coin mould etc were also unearthed. Beads, bangles, copper bangles iron objects, steatite objects were noticed in this site.

The discovery of beads, dice, amulet like object, bangle pieces, etc,. indicates the cultural life of that period suggesting that they used to wear chains made of beads, played with dice to spend their leisure time. The coin mould, blow pipes and the traces of furnace all indicates that there were industries of minting coins, producing glass and iron objects.

Conlusion

The above mentioned medieval sites are quite interesting to know the cultural developments of our people. It shows the town planning and development of urbanization, Systematic drainage system and separate channels for outgoing wastage water were well planned. Small tiles were used for roofing. The palace was decorated by using the round, oval shaped medallion, embedded with yali figures. These are some of the interesting architectural features of the medieval period.

In the medieval period kings ventured into foreign territories both within the country and abroad. This opened up opportunities for trade and cultural exchange with other countries.

Most of the sites revealed continuous occupation from the megalithic to the medieval times.

e. Modern Age (1400 CE - 1900 CE)

Gingee

The Archaeological Survey of India Southern circle carried out excavation in the Royal Enclosure (inner fortification) to expose the structures and understanding the plan of the citadel as well as phases of structural activities, A mound measuring about 80 m north-south

and 70 m east-west, located in front of the Kalyana Mahal, a seven-storied pleasure pavilion located within the enclosure was taken up for operation. Earlier clearance work in the mound revealed the existence of a massive enclosure wall and a lime-floor indicating the existence of a large structural complex of considerable importance.

The excavation during this season, limited to about 1600 sq m of the mound, revealed two structural phases viz., I and II. During phase I. there were two structures (1 and 2) enclosed by a massive enclosure wall. One of the characteristic features of the structures of phase I was the use of combination of ashlar masonry for the bottom portion and brick masonry for the top portion of the walls, a feature that is common to all the Nayaka buildings in Gingee. On the other hand, the structures built during phase II, were of poor constructional quality as rubbles, concrete chunks of roof of the earlier buildings, bricks and brick-bats were reused freely without any order. Therefore, phase I may be dated to the Nayaka period, i.e. circa sixteenth-seventeenth century, when Gingee was subjected to protracted warfare.

The excavation revealed the existence of an Audience Hall and an adjacent Council Chamber. The Audience Hall, oriented north-south had two divisions. The southern portion (27.5 x 20.75m) accommodated the ornate dias for the throne whereas the northern portion raised in four levels possibly for the court.

On the two sides, east and south of this portion, was a low raised platform with pillar-bases. Interestingly, there were no such bases in the middle as they could abstruct the view of the ruler. A closed drain originated from this portion to join probably the main network of drains. This drain served the purpose of disposing the fluids; an integral part of several ceremonies connected with the kingship and was always considered to be sacred.

Among the antiquites recovered from this area, mention may be made of two pots full of lead pellets, numbering about three thousand two hundred and rest of the antiquities were of iron. Besides, a small Gạnesa statue made on schist, two silver rings and a gold earlet were also recovered from the same pit. Further excavation would be required to ascertain the nature of structural remains to the east of the Audience Hall, towards which it seems to continue and to the south of Council Hall.

Tarangampadi

Tarangampadi, the historical port, lies on the East coast in Poraiyar Taluk of Nagapattinam District. The river Poraiyar locally called Uppanaru, has a confluence with the Bay of Bengal on the Southern side of the fort.

Tarangampadi fort was first constructed in 1620 CE by the Danish. The king of Denmark sent two ships to India under the leadership of Ove Gedde with the help of Roeland Crape of Holland, a treaty was signed between Thanjavur Nayak ruler, Ragunatha Nayak and Ove Gedde on on 19 November 1620. This agreement was written in golden leaf. According to the agreement the port Tarangampadi was given to the Danish traders and provision was made for collecting the tax and construction of the fort. Most of the portions of the fort were reconstructed several times. Fortunately we have the original plan and other structures of the fort Tarangampadi fort consisted of two large structures. They are the rampart wall and the main building. The rampart wall was a fairly large four-sided structure with bastions at each cardinal point.

This rampart wall was damaged due to storms. So it looks like a mound. To reconstruct the rampart wall a trial trench was laid in the year 2001. The base of the whole rampart wall was not exposed. So in the year 2002, three more trenches were laid in and around rampart wall.

To reconstruct the damaged rampart wall trial trenches were laid. The aim of the excavation is to know the nature of the foundation of the rampart wall and to strengthen the foundation. Totally eight layers were exposed in this excavation.

A single layer paved brick was laid right on the Natural soil i.e. Sea Sand. Above this brick paved floor, 30 cm thick compact clay mixed with brickbats and lime was laid. Above this compact earth filling again 30 cm thick yellowish soil, locally called *'tavittuman'* was used. Over this yellowish soil, another brick floor was paved. The total breadth of the floor comes to 12.25 meter, by learing a meter on the interior, the rampart wall is built upon this floor covering breadth of 11.25 meters.

The rampart wall consists of two walls each having a thickness of 75 cm. The gap between the two walls (9.25 cm) is filled with brickbats, soil and sand. The total height of the wall is 4 meters. The binding material used in this wall is lime mortar. The size of the bricks is 20×13×4 cm. The upper surface of the wall slopes inward in conical shape and the surface is completely covered with paved bricks. The conical shape and the brick paved surface helps to drain the rainwater as well as prevent any seepage of water into the wall surface.

The bricks used in the rampart wall are made of fine clay and well burnt. All bricks are equal in size whereas the brick used in the buttress wall are mixed with more sand and irregular in shape.

One Chinese potsherd was collected. Flower designs and lines were found both interior and outer surface. One beautiful Chinese lady figure was also obtained, A brick course was paved on the natural soil and a red colour soil mixed with lime was also noticed above the paved brick floor. Another course of brick paved floor was also noticed above. The rampart wall was constructed above the brick floor. So two foundation coarse of bricks were noticed in this foundation. This kind of foundation was also noticed in the Sendamangalam (rampart wall foundation) excavation dated to 13th cenrury CE.

Panchalankurichi

Panchalankurichi was the capital of Vira Pandya Kattabomman at the close of the 18th century. It is situated in Ottappidaram taluk of Tutukorin district.

The Panchalankurichi fort area measuring 35 acres remained as a mound. The aim of the excavation was to find out the remnants of the palace of Kattabomman. The excavation revealed the main palace with its east facing entrance in the southern corner, The entrance was flanked by three rooms on each side. There was a square pit about one and a half meters lined with lime plaster probably intended for storing grains. A passage with a slope to the north led to the audience hall which is the most impressive part of the structure. It had a raised platform at the western end, built of brick The eastern part of the platform was decorated with ornamental mouldings and a row of sockets for lamps. In the northern wall adjacent to the main platform was found a cannon ball, embededed into it. The Kalyana mandapa lying adjacent to

the audience hall has at the centre a square platform and a raised platform all around with an intervening passage. The glass bottles, stone ball cannons, porcelain plates and other antiquities of the British period were collected in the clearance of the debris.

IV. Important Revelations from major excavations

The Archaeological investigations carried out in the excavation field for the last five decades have completely changed the historical picture of Tamil Nadu. The reasonably sufficient data collected from the excavations testified to the existence of the Palaeolithic, Mesolithic, Neolithic and Iron age cultures, unfolding a number of aspects of human life in vogue in this period. The available published reports of scientific study in recent years have also made the time span of the sites relatively more precise than what is previously known. The story behind these archaeological investigations indeed are very interesting as it has been the result of popular curiosity and scientific techniques of investigations coupled with a new understanding of the process of culture dynamics.

The Palaeolithic Culture as revealed from the excavations carried out at Attirampakkam established the nature of hominid activities at the site in the environmental context and the age of the assemblages. Excavations also revealed the lower, middle and upper Palaeolithic cultures spanning more than 5,00,000 years of occupation. Thousands of tools of Lower Palaeolithic Acheulian hominids were found deeply buried within beds of laminated clay, indicating a possible lagoon or swampy environment close to the Paleo-Kortallayar river basin. A very interesting discovery was the set of animal foot prints-the first of their kind to be documented in South Asia. These comprise a set of 17 round impressions; a set of hoof-prints and three fossil teeth including an upper molar of a water buffalo, a lower molar of a horse and a left lower molar of a nilgai. (Fossils are rare at Indian Lower, Middle Palaeolithic sites). Attirampakkam, Vadamadurai, Gudiyam are some of the important excavated sites of prehistoric period that reinforced the finding at Kortallayar basin.

Mesolithic or Microlithic Age (the late Stone Age) succeeded the middle stone age. An important feature of this culture was the extensive use of Microlithic tools used for fishing. A number of microlithic tools were

recovered from the evcavations at Mangudi, Tiruthangal, Teriruveli, T. Kallupatti, Mayiladumparai, Dailamalai, Togarapalli, Mullikadu, and Kovalanpottal. The occurrence of microliths in the stratified layers was the important finding at Mangudi excavation. A sterile layer below the megalithic cultural phase was also noticed. Under this sterile layer the microliths were found. These discoveries certainly proved the existence of the microlithic culture in Tamil Nadu in the cultural sequence and chronological context.

The Neolithic People and their settlements are equally remarkable while studying the pre-historic period of Tamil Nadu. But less investigations were carried out in South India of late prehistoric remains, which include enigmatic monuments dating back to Neolithic and Iron Age periods. Especially notable are the Neolithic ash mounds in Karnataka and Andhra regions and the discovery of various kinds of stone implements in Dharamapuri, Vellore and Tiruvanamalai regions of Tamil Nadu. The ash mound phenomenon is focused in the semi-arid granitic region of the southern Decccan, particulary in the Karnataka region. Both functional and ritual interpretations have been proposed for the ash mounds, but the activities that led to their creation remain unknown, further study in focusing this aspects has to be carried out, which will solve the Neolithic problem of Tamil Nadu. Whatever these activities were, they came to an end sometime in the middle or late Neolithic period and were eventually replaced by altogether different activities, that led to the creation of mounments made up of very large stones. These megaliths are found all across the South Indian peninsula, and seem to have been created for burying the dead. Until recently, most pre-historic archaeology in South India has focused on description and chronological reconstruction. Much interpretation is required for further study on the migration and cultural traits of this period.

The pit dwelling located at Paiyampalli excavation revealed a distinct feature of Neolithic and Megalithic cultures. The excavation also showed some developments in the mode of man's life style in adopting technique for the preparation of ground and polished stone axes and the association of microlithic tools along with Neolithic culture.

The excavation at Mayiladumparai revealed the three phase of Pre-historic period i.e., Microlithic, Neolithic and Iron Age. The accurrence of hand made red ware pot sherds. along with Neolithic stone tools and the discovery of iron age implements and black and red ware potsherds reveals the fact that the transformation of Neolithic to Megalithic culture occurred in the region.

The recent systematic excavation at Modur has yielded a large number of stone objects like spheriod rubbers, oval shaped discoids, pestles, grooved hammers and different type of grinders. More than 500 stone objects were found. The recovery of a beaked mother goddess figurine in Modur is of special significance. It bears close resemblance to the figurine of mother goddess excavated at Inamgaon in Maharashtra by Archaeologists of the of the Deccan College, Pune. For the first time Neolithic implements were unearthed in the stratified layers and were obtained in the Pre Iron Age levels. Ir is noteworthy that similar types of tools were obtained at Pikhihal, T.Narasipur, Kupgal, Kudatini, Toranagallu (Bellary District) in Karnataka and Paiyampalli in Tamil Nadu. The occurrence of large quantity of polished stone Celts, and other stone objects along with Grey, brown and tan ware pot sherds coincides with the date for Neolithic culture of Tamil Nadu which is assigned to 3000 BCE.

Iron Age Culture: The usage ef Iron was the important phenomena of Iron Age or Megalithic period as it was the harder and cheaper metal as well as more easily avallable than copper and bronze. Iron tools and implements helped in the advancement of agriculture which in turn leads to the development of civilizations. Tne development of script and languages which formed the basis of all modern languages and literature, advancement in art, architecture, formation of large empires and the rise of town and cities, emergence of a rich and powerful middle class and the widespread migration of people are the general phenomena of this age. To some extent, in this age the existence of social inequalities began which later on developed into a malevolent factor for our present day society. Sanur, Amirthanmangalam, Kodumanal, Adichanallur and Mallappadi excavations have brought to light the existence of the Iron Age inhabitations and their cultural traits in Tamil Nadu.

Historic Period

In Tamil Nadu, the historic period and the classical Sangam age are identified with each other. The first bright epoch in the history of the Tamil land is that reflected in the literature of Sangam. The archaeological factors confirm the evidence of a Roman factory in the first century CE and and goes to confirm the date suggested for the Sangam age.

The discoverd of Roman pottery at Arikamedu was the water mark for studying the then Roman society and the trade contact between Tamil Nadu and Rome. Most ancient Roman ceramics are divided into there general categories according to their featuire and functional values. The first and foremost ceramic Amphorae were primarily used for import and export of wine, olive oil and Quam, i.e, a fish sauce. While the Coarse ware was utilitarian and undercorated; and fine ware was functional as well as decorative. Roman fine wares usually had a red slipped surface and sometimes had additional figural decoration. Depending on the local production, these fine wares be referred to as *Arretine, terra sigillata*, or African Red Slip. *Terra Sigillata* is a broad term that applies to pottery from any locale having a shiny red slip wares made in Arezzo, Italy, a major production centre during the reign of Augustus circa first century CE, are referred to as Arretine. And the African Red Slip or ARS wares were made in Africa and date from the second to eighth to cighth centuries CE. Stamps are perhaps the most reliable source of information for determing locale. Each factory or major production centre had its own logo, which generally identified the owner of the factory, stamped on the vessels. These insignias not only indicate locale, but also allow archaeloogists to geographically mark the development of certain pottery styles by examining distribution patterns. The unstamped potsherds are assessed by their appearance. form, shape, quality, texture, and colour of clay and decoration which have the regional expressions. Good number of stamped Arretine and the African Red Slip potsherds were found in the excavations at *Arikkamedu and Alagankulam.* In particular, the discovery of antiquities in Alagankulam revealed the existence of Roman tradecentre in the east coast.

Other important artefacts that prove the contact between India and the rest of Asia are tiny glass beads of dark blue, dull red

and a few other colours found in huge numbers at Arikkamedu. These beads are similier to the beads found in Thailand and in Korea where 10,000 of them were found in the tomb of a king who died in 523 CE. Similar beads were also found all along the coast of East Africa, South East Asia, in the Philippines, Indonesian islands and in Japan. Hence to some extent we can assume that thesc might have been manufactured at Arikkamedu and exported to other places.

The excavation at *Korkai* had brought to light a few pieces of Northern Black Polished ware datable to 3rd 4th centurv BCE for the first time.. At Vasavasamudram a neck portion with handles on either side of an amphora of Mediterranean origin was another important find from excavation. At Kodumanal the unearthed antiquities from both deposits of habitation and burial sites yielded good number of inscribed potsherds, carnelian beads, and spindle whorls confirms the existence of bead making industry and weaving industry. Kanchipuram excavation proves the fact that the early punch marked coins and other coins were cast by terracotta moulds.

The structural activities of the ancient people and their engineering skill proved that they were masters in construction of water reservoir and wharf and the basement of Buddha Vihara. Uraiyur, Tirukkampuliyur and Alagarai excavations yielded number of inscribed potsherds which has revealed the widespread knowledge of writing among all classes of people.

Medieval

Formation of cities/Urbanization happened primarily in the Ganga plains when the Mahajanapadas rose into prominence. This was followed later in other regions i.e. in the Deccan and south India. The formation of cities was not only due to trade activities but also the emergence of strong political powers and spread of religions. Thus Jainism and Buddhism exerted their influence in this process.

The development of urban centers did not occur overnight; the emergence of cities, their growth, and trade flourished and

continued till the 5th-6th century CE and beyond the first millennium CE. The temple cities, like Thanjavur, Srirangam, Kanchipuram, Madurai continued to exist as the urban centers.

a. The study of the urban cities can be classified as (i) Power centers (fortified cities viz) Thanjavur, Gangaikondacholapuram, Uraiyur, Vallam and Palayarai, Sendamangalam, Panchalankuruchi etc., (ii) Trade and economic centers with high consumer potential (iii) port cities like Kaveripattinam, Arikkamedu, Alagankulam, Korkai and Vasavasamudram etc., as well as (iv) towns showing trends of urbanism - Sengamedu, Andipatti, Maligaimedu, Perur and (v) Cultural and religious centers Thanjavur, Mammallapuram and Kanchipuram. To locate and study hinterland towns with prominent regional city centers was made possible due to the excavations carried out in these areas. The study of Arikkamedu, an entry port on the eastern coast, revealed that besides it being an Indo-Roman trading centre it was also a pivot for regional exchange system. This aspect came to light during the study of excavated antiquities from Sengamedu and Mallgaimedu, and they show the development of these towns with urban trends.

Chronology : The chronology of the sites may be fixed by studying the artifacts and analyzing them with scientific methods. The Iron Age is dated to earlier than 5th century BCE in Tamil Nadu. The dating is now revised due to the adaptation of Carbon 14, Optically stimulated Luminescence (OSL) and other dating methods. For *Korkai* (Tuticorin dt) the C-14 dating available in 805+95 BCE and *Paiyampalli* (Vellore) 640+105 BCE. These two dates suggest that Tamil Nadu was in the grip of Iron Age during the beginning of the 1st millennium BCE. Red ware as well as black and red ware potteries excavated from different levels of the Urn Burial Sites, Adichanallur, Tamilnadu have been subjected to OSL dating by the well-known Single Aliquot regenerative dose (SAR) protocol. The OSL ages of the potteries are found to lie in the range 3600 - 6000 years B.P. Pottery is the most common type of artifact found at archaeological sites containing obvious information of its age if viewed through the windows of luminescence dating. In that sense this study which testifies that the ancient human settlement at the river bank of the Tamaraparani dating bank to Bronze age civilization provides a totally

new application of luminescence dating in providing vital information on the early civilization that flourished in South India. *Kanchipuram* 480 BCE, (Kanchipuram district), Appukkallu 300 BCE, (Vilore district), *Kaveripoompattinam* 316 + 103 BCE, (Nagappattinam district) Poompuhar 316 + 105 BCE, and Alagankulam 2260+100 suggest not earlier than 5th century BCE for the Iron age culture in Tamil Nadu. Scientific study was under taken to establish the geomagnetic field intensity value and to determine the age of the samples. The artefacts found in the excavation at Maligaimedu, Alagankulam and Teriruveli were snbjected to magnetic studies. According to this, the samples from Maligaimedu belonged to 500 CE to 600 CE, and that of Teriruveli dated to 300 BCE. The Alagankulam potteries reflected the technological development in different firing atmospheres and colouration of artisans during the period 3rd century CE Thus the tentative chronology fixed by assessing the antiquities was scientifically proved by analysing pottery and brick samples colleted from the trenches.

V. Cultural Heritage of Tamil Nadu

Pre-Historic Period

Palaeolitic man initially lived in the natural caverns as seen in Gudiyam cave near Poondi. In Neolithic period he moved to the foot hills by digging pits for the dwellings and having thatched roofs over them. He used crude stone tools in Palaeolithic age, small sized tools ic Microlithic period, and polished stone tools in Neolithic period. When they bagan to live in a settled life, manufactured hand made pottery and they knew the art of cooking. In the megalithic period they used wheel turned fine variety of pottery for their daily usage. The major occupation of these periods were hunting, farming, fishing and rearing of the animals.

The disposal of dead was widely practised in this period. This had been revealed from the availability of different kind of burials like Urns, Cairn circle, Dolmenoid cist, Sarcophagus etc. They also used big sized pots in various shapes even the shape of the animal (sarcophagus) for burying the dead. The people of this period believed in life after death and they worshipped their ancestors. The worship of mother goddesses also seem to have gained importance during this period as evidenced from Modur and Adichanallur excavations. The iron implements found in the excavations of almost all megalithic sites, revealed the fact that they knew the art of iron smelting and making metal objects. Bead making and weaving industries also existed in this period.

Historic Period

Building Activities :

The early historic and the medieval period show the massive development in building activities. Big sized baked bricks were used for constructing houses as revealed from excavations at Korkai, Karur, Poompuhar etc. The flooring was laid by mixing lime with rubbles of the available materials like lime shell (Alagankulam). Ring wells were provided for drinking water. In medieval period secular buildings like palaces were constructed with baked bricks as revealed from Gangaikondacholapuram excavations. The roof was covered with flat tiles and fixed in frames with the help of iron nails and clamps. The superstructures were supported by wooden pillars. Four types of channels were noticed in the Padaivedu excavation. They were used for bringing water from the near by river and draining the sewage water.

The food habits of the people of Tamil Nadu is known from the excavated antiquities of various sites. They took both vegetarian and non-vegetarian food. This has been revealed from the occurrence of food grains and animal bones in the excavations. Earthen vessels were used for storing and cooking the food.

The excavated antiquities such as terracotta ear ornaments, beads and amulets, shell bangle pieces, semiprecious stone beads reveals that the people adorned themselves with ornaments. In the medieval period they began to use glass bangles with decoration, copper and gold ornaments.

Commercial Activitics

Korkai was the center for making shell bangles; pearl fishery. Recent findings of large number Roman potteries and coins from Karur, Alagankulam, Arikkamedu revealed the foreign trade. The finding of NBP sherds from Korkai and Alagankulam proves the trade contact with Gangetic plain.

Social Condition

The occurrence of large number of graffiti marked and inscribed potsherds in the excavated sites exposed the fact that the people knew

the art of writing. The different types of hip-hops were collected from the excavations might have been used as a playing object by the children.

The other popular play appears to be gambling using dice. As far as Tamilnadu is concerned this play seems to be played from very early period i.e. from 4th Century BCE (Algankulam). Chess was another indoor game played by this people. For this play they used gamesman, made up of terracotta and bone. These type of chess terracotta (games men) are found in the excavations at Tirukampuliyur, Andipatti and Perur.

In the early historical period Buddhism had its foothold in Tamil Nadu. Excavations revealed the basement of the Vihara and Stupas at Kanchipuram and the Vihara at Poompuhar. The devotees seem to have worshipped Buddhapada and miniature Buddha images here.

The worship of Hindu Gods had become prominent during 4th-5th centuries CE. The excavations undertaken at Alagarai and Tirukkampuliyur had revealed the fact that Ganapati with his vahana mouse was also worshiped. The huge terracotta bull found in the excavation at Andipatti might have been used for votive purpose.

Senthamangalam excavation has brought to light that Vishnu as crawling Krishna was in great veneration among the Vaishnavites. Worship of Shiva as Phallus by the Saivites is known from the discovery of Phalluses during exploration held at Padaivedu.

VI. Recommendations for further reasearch

The above overview of Tamil Nadu archaeology as gleaned from excavations gives us an accurate picture of the state of archaeological excavations in Tamil Nadu. It has several strengths; it also has numerous lacunae which need to be plugged. Some of these weaknesses are;

1. A vast majority of the 120 odd excavations have been carried out in sites which represent the Iron age or the Megalithic period to the exclusion of other periods such as palaeolithic, Neolithic, medieval and modern times. This gives us a skewed picture of Tamil Nadu's history with a plethora of information

relating to the Iron age. Greater effort must be taken to study the sites belonging to other ages as well.

2. Most of the excavations are undertaken in a vertical fashion with emphasis on cultural seuqence and collection of artifacts. At the same time, horizontal excavation is not given the attention it deserves. There may be many reasons for it; constraints of time and resources being important ones. However, for a better understanding of the historicity of a site, more number of horizontal excavations must be pursued.

3. The facilities for carrying out tests on the excavated objects are woefully inadequate. Modern laboratory tests such as C-14, OSL dating, Analysation of pollen grains, bone pieces etc. can be done only in select Institutions after expending considerable money and time. It is important for archaeology that there are more number of well equipped chemical, physical and geological laboratories which can give accurate results on dating and the nature of substance recovered.

4. Lack of adequate funding support is another weakness often found under Indian conditions for carrying out excavations satisfactorily.

5. Though a number of excavations totaling 120 or more have been conducted in Tamil Nadu, the materials unearthed have not been properly analysed for writing the archaeological history of the state. The main culprit here is lethargy in the shape of poor documentation; of the many excavations done less than half are available for study in published form. But in recent years, the pace of documentation has improved the State Department of Archaeology has published 14 reports in the last few years. It is hoped that other agencies will adhere to the discipline of recording their findings and make it available to discerning students of archaeology.

Some recommendations for future researches:

- There is an urgent need to rescue archaeological sites from different kinds of threats and to safeguard them from any kind of destruction in the immediate future. For this purpose, a national Heritage Act is absolutely necessary.

- Properly controlled scientific excavations using the whole range of modern material and theoretical tools is a real necessity.

- Greater emphasis should be placed to investigate the internal dynamics of late pre-historic societies in South India particularly the Neolithic settlers by exploring evidence for economic, social and ritual practices.

- Investigations and excavations must be broad based so as to cover a wide variety of sites. River basins afford an excellent opportunity to study the capital cities, studies of empires, emergence of urbanization, and trade links with foreign countries Some of the potential river basin sites that can be taken up for exploration / excavation are

a. Palar basin (Kanchipuram, Mamallapuram and Vasavasamudram)

b. Kaveri and its tributaries (Uraiyur, Poompuhar, Karur and Kodumanal, Vallam. Tirukampuliyur, Alagarai and Palayarai)

c. Ariyankuppam river (Arikkmedu)

d. Manimukta river (Sengamedu)

e. Vaigai basin (Madurai and Alagankulam)

f. Tamraparani (Korkai)

g. Noyyal (Perur, Boluvampatti)

h. Deviyaru (Mangudi)

i. Paravanaru (Kudikadu)

j. Kedilam (Sendamangalam)

k. Tenpennai (Tirukkoilur)

l. Pampaiyaru (Tiruvamattur)

- Further investigations, fresh explorations and excavations must be undertaken to have a better understanding of the pre-iron age phase and also its links with the Bronze Age culture of North India or Harappa.

- One of the steps is to encourage a multi-disciplinary, integrated approach to the study of pre-historic South India especially the Neolithic period.

- We must collaborate with other teams working in South India in order to develop a systematic ceramics chronology that can be used by all projects working in the region.

- It is important to train students in archaeological field methods.

- Documentation of field work is a very important aspect of archaeology. By publishing results of excavations as monographs, we can ensure that the knowledge gained in one site can be disseminated widely. This will ensure improved performance in future digs.

- Holding regular workshops and conferences to present and discuss research findings is another important area which has not received due attention. This must be encouraged so that field archaeologists develop skills of presentation and gain confidence to face large audiences of their peer group.

- The study of differences and evolving patterns of ideas of these civilizations benefits the future generations by setting examples, distinguishes between good and bad, and makes an impact on history forever.

VII. Conclusion

Globalization is the talk of the day and this has also been reflected in the phenomenon for understanding the past and the present day study of archaeology and history. With this process, the world is being made into one place i.e., Global village with its systemic properties. The study of globalization and of the global system constitutes a potential revolution in the social sciences It also involves inter-connections across some boundaries and the dissolving of some other boundaries. The basic essence of globalization is the convergence of all the countries into a single unit, whether economically or politically. It is through this homogenous identity all countries can be united and the boundaries can be also erased.

Thanks to the archaeological excavations, it has brought out the ruins of Pompeii buried by volcanic eruption and preserved the towns like Harappa so perfectly. Excavations were even able to find carbonized loaves of bread in a bakery offering an unprecedented window into the daily life of ancient Roman city in CE 70. Similarly, unique and rare antiquities are found in Tamil Nadu which revealed the continuous occupation of the sites till today. All local differentiation and regional variations are reflected in the materials unearthed; this is due to the cultural exchange and intercultural borrowings. But to some extent, excavations carried out in Tamil Nadu have revealed the unknown history of Tamil Nadu and has thrown open the various cultural activities of our ancestors for further study and research.

I hope I have covered, in my presentation, the whole gamut of archaeology of Tamil Nadu. In my narration, I have drawn heavily upon the works of my predecessors, Dr. R. Nagasamy and Thiru Natana Kasinathan, to whom I am greatly indebted. I also wish to acknowledge the useful hints provided by my team of Archaeologists Mr. K. Sridaran, Mrs. S. Vasanthi, Mr. Thulasiraman, Mr. S. Selvaraj, Mr. S. Subramanian etc. and typing the work neatly by Mr. R. Gopu.

The archaeology of Tamil Nadu is not a static thing but a dynamic force. It is forever evolving with the passage of time and with the revelation of new discoveries. Every fresh exploration or excavation - though it takes off from previous efforts - contributes significantly to an understanding of the past by unfolding new vistas and unraveling fresh mysteries of our glorious past. It is my fervent hope that this lecture will spur action towards undertaking more excavations in hitherto uncovered areas such as Neolithic/Chalcolithic culture, Kalabhras period etc., and throw fresh light on topics left untouched or not fully explored. By this approach, we can hope to gain better insight in to the dark alleys and narrow bylanes of Tamil Nadu archaeology.

References

1. Begley V. (ed), The Ancient Port of Arikkamedu New Excavations and Research 1989 - 1992, 1998, ECOLE FRANCAISE D'EXTREME ORIENT, Pondichery.

2. Gururaja Rao, B. K., The Megalithic Culture in South India, Prasaranga 1972, University of Mysore, Mysore.

3. Gurumurthy, S., Deciphering of Indus Script, 2000, University of Madras, Chennai.

4. Karashima Noboru, Ancient and Medieval, Commercial Activities in the Indian Ocean; Testimony of the Inscriptions and Ceramic Sherds, 2002, Taisho University, Tokyo.

5. Kasinathan, N. (ed), Padavedu Excavation, 1993, Department of Archaeology, Chennai.

6. Kasinathan, N. (ed), Tirukkoilur Excavation, 1996, Department of Archaeology, Chennai.

7. Kasinathan, N. (ed), Metropolis of the Medieval Cholas, 1998, Department of Archaeology, Chennai.

8. Mahalingam, T. V., Excavations at Lower Kaveri Valley (Tirukkampuliyur & Alagarai) 1962-64, 1972, University of Madras, Chennai.

9. Mahadevan Iravatham, Early Tamil Epigraphy; From the Earliest Times to the Sixth Century A.D., 2003, Cre-A, Chennai and the Department of Sanskrit and Indian Studies, Harvard University, Harvard.

10. Nagaswamy R. and Abdul Majeed A., Vasavasamudram, 1978, State Department of Archaeology, Government of Tamil Nadu. Madras.

11 Narasimhaiah, B., Neolithic and Megalithic Cultures in Tamil Nadu, 1980, Sundeep Prakashan, Delhi.

12. Rajan, K., Archaeological Gazetteer of Tamil Nadu, 1997, Manoo Pathippakam, Thanjavur.

13. Raman, K.V., (ed), Excavation at Uraiyur, Tiruchirappalli District, 1964-65, University of Madras, Madras.

14. Sastri Nilakanta, K.A., A History of South India; from Prehistoric Times to the fall of Vijayanagar, 1958, Oxford University Press, Oxford.

15. Shanthi Pappu, The Palaeolithic Archaeology of the Kortallayar river basin, Tamil Nadu, Kalvettu No. 58, Department of Archaeology, Chennai.

16. Shanmugam, P., Indonesiavil India Panpattu Takkam (Impact of Indian Culture in Indonesia) 1993 Avanam, Journal of Tamil Nadu Archaeological Society, Vol. 4.

17. Shetty Ashok Vardhan, K.., Excavations at Mangudi, 2003, Department of Archaeology, Chennai.

18. Shetty Ashok Vardhan, K., Excavations at Perur, 2003, Department of Archaeology, Chennai

19. Srinivasa Iyengar, P.T., History of Tamils: from the earliest times to 1000 A.D., 1983, (Reprint) Asian Educational Service, New Delhi.

20. Sridhar, T.S. (ed), Rock Art of Tamil Nadu, 2005, Department of Archaeology, Chennai.

21. Sridhar, T. S., Excavations of Archaeological Sites in Tamil Nadu - Modur (2004-2005), 2005, Department of Archaeology, Chennai.

22. Sridhar, T. S., Excavations of Archaeological Sites in Tamil Nadu - Alagankulam, 2004, Department of Archaeology, Chennai.

23. Subbarayalu, Y., Vallam Excavation, 1985, Tamil Civilization, Vol 2, No. 4.

24. ஸ்ரீதர். தி. ஸ்ரீ. (ed), தமிழக அகழாய்வுகள், ஆண்டிப்பட்டி (2004-2005), 2005, தொல்லியல்துறை, சென்னை.

25. "Ancient India" Volumes.

26. "Indian Archaeology - A Review" Volumes,

CORRIGENDUM

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Archaeology of Tamilnadu

Excavated Sites : Palaeolithic to Iron Age - Part I

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
1	Attirampakkam Tiruvallur Kortallayar	—	—	—	—	Palaeolithic
2	Gudiyam Cave Tiruvallur	—	—	—	—	Palaeolithic
3	Neyveli Tiruvallur Kortallayar	—	—	—	—	Palaeolithic
4	Poondi Tiruvallur Kortallayar	—	—	—	—	Palaeolithic
5	Vadamadurai Tiruvallur Araniyar	—	—	—	—	Palaeolithic
6	Tiruttangal Virudunagar	—	—	—	—	Mesolithic
7	T.Kallupatti Madurai	—	—	—	—	Mesolithic

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
8	Terirruveli Ramanathapuram	—	—	—	—	Mesolithic
9	Mailadumparai Dharmapuri	—	—	—	—	Mesolithic
10	Paiyampalli Vellore	—	—	—	—	Neolithic
11	Appukallu Vellore	—	—	—	—	Neolithic
12	Mallappadi Dharmapuri	—	—	—	—	Neolithic
13	Modur Dharmapuri	—	—	—	—	Neolithic & Megalithic
14	Kallerimalai Vellore	—	—	—	—	Iron age
15	Malayampattu Vellore	—	—	—	—	Iron age
16	Kambarmedu Nagapattinam	—	—	—	—	Iron age
17	Amirthamangalam Tiruvallur	—	—	—	—	Iron age
18	Aeroville Pondicherry	—	—	—	—	Iron age

S.N.	Sites, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
19	Anaimalai Coimbatore	—	—	—	—	Iron age
20	Kovalanpottal Madurai Vaigai	—	—	—	—	Iron age
21	Sanur Kanchipūram	—	—	—	—	Iron age
22	Sittannavasal Pudukkottai	—	—	—	—	Iron age
23	Tiruvakkarai Villuppuram	—	—	—	—	Iron age
24	Mottur Thiruvannamalai	—	—	—	—	Iron age
25	Adichanallur Thuthukudi Thamiraparani	—	—	—	—	Iron age
26	Kunnattur Kanchipuram	—	—	—	—	Iron age
27	Kodumanal Erode Noyyal	—	—	—	—	Iron age & Early Historic
28	Thandikudi Dindukkal	—	—	—	—	Iron age

Archaeology of Tamilnadu

Excavated Sites : Early Historic Period to Medieval Period - Part II

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
1	Perur Coimbatore Noyyal	...	...	Bead making industry and located in the ancient highway to Chera nadu	...	Early historic
2	Maligaimedu Cuddalore	...	...	...		Early historic and Medieval
3	Mangudi Thirunelveli Deviyaru	...	...	...	Referred in Sangam literature	Early historic
4	Andipatti Tiruvannamalai	...	...	Sangam Period trading centre	...	Early historic
5	Kaveripoompattinam Nagapattinam Kaveri	Chola port town	Sangam Chola	Sangam	Chola Second Capital	Early historic
6	Korkai Thuthukudi Tamiraparani	Pandya port	Sangam Pandya	Pearl, fishing	Pandya Second Capital	Early historic

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
7	Adiyamankottai Dharmapuri		Adiya Kings Sangam age	Sangam	Sangam Town	Early historic and Medieve
8	Arikkamedu Pondicherry Ariyankuppam river	'Veerai' Sangam port	...	Roman	Sangam Town	Early historic
9	Alakarai Trichy Kaveri	...	...	Sangam	...	Early historic and Medicval
10	Alagankulam Ramanathapuram Vaigai	Saliyur-port town of Sangam Pandyas	...	Roman	Sangam Town	Early historic and Medieval
11	Uraiyur Trichy Kaveri	...	Cholas	Sangam	Sangam Town	Early historic
12	Karur Karur Amaravathi	...	Chera Kings	Roman	Sangam Town	Early historic
13	Kanchipuram Kanchipuram Vegavati a tributary of Palar	...	Thonadaiman and Pallavas	Sangam	Sangam Town	Early historic

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
14	Karaikadu Cuddalore	...	...	...	...	Early historic
15	Guttur Dharmapuri	...	...	Terracota beads	...	Early historic
16	Kudikadu Cuddalore Paravanaru	Sangam	...	Shell bangles and beads	...	Early historic
17	Sengamedu Cuddalore Manimutharu	...	...	...	...	Early historic
18	Tirukampuliyur Karur Kaveri	...	...	Terracotta	...	Early historic
19	Boluvampatti Coimbatore Noyyal	...	...	Beads, Textile Terracottas	...	Early historic and Medieval
20	Vallam Thanjavur Kaveri	...	Cholas	...	Sangam	Early historic and Medieval
21	Vasavasamudram Kanchipuram Palar	Roman	...	Roman (Amphorae)	...	Early historic

S.N.	Site, District, River basin	Port Town	Capital Cities	Trading Centre	Sangam Town	Nature of the Site
22	Sendamangalam Villupuram Kedilam	...	Kopperunsingan	...	...	Early historic and Medieval
23	Tirukkoilur Villupuram Thenpennai	...	Malaiyaman	...	Sangam	Early historic and Medieval
24	Thiruvamattur Villupuram Pampaiyaru	...	...	...	...	Early historic
25	Mamallapuram Kanchipuram	Pallavas	...	Pallavas	...	Early historic and Medieval
26	Palayarai Thanjavur Thirumalai Rajan river	...	Cholas	...	...	Medieval
27	Gangaikonda Cholapuram Perambalur	...	Rajendra Chola	...	...	Medieval
28	Ukkirankottai Tirunelveli	...	Pandya	...	...	Medieval
29	Darasuram Thanjavur Arasalaru	...	Chola	...	...	Medieval

S.N.	Site District, River basin	Port Town	Capital Cities	Trading Centre	Sangam	Nature of the Site
30	Kurumbanmedu Thanjavur	...	Cholas	...	...	Medieval
31	Periapattinam Ramnad	Pandyas	...	Pandyas	...	Medieval
32	Kannanur Trichy Kollidam	...	...	Hoysala Capital City	...	Medieval
33	Padavedu Vellore Kaundala Naga nadi	...	...	Sambuvaraya Capital City	...	Medieval
34	Senji (Gingee) Villupuram Sangarabarani	...	...	Capital of Senji Nayaks & Desinguraja	...	Medieval
35	Panchalankurichi Tirunelveli	...	...	Capital of Virapandiya Kattabomman	...	Medieval

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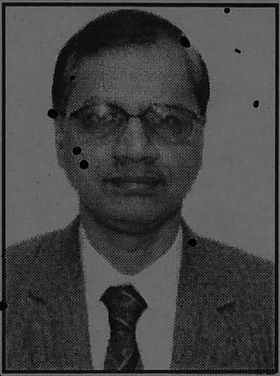

T. S . Sridhar, IAS, (b. 1955) is a Senior Officer from Indian Administrative Service. He has obtained his post-graduate degree from Madras Christian College, Chennai and entered into the service with British history and European history as the main subjects. He has held many positions including Secretary to Government in Highways and Agricultural Department, and Chairman of Tamil Nadu Electricity Board. In the capacity of Special Commissioner of Archaeology, (18.06.2004) took keen interest in the field of archaeology, initiated excavations at Andipatti (Tiruvanamalai District), Modur (Dharmapuri District), Parikulam (Tiruvallur District) and Marakkanam (Villupuram District). The excavation reports in respect of 11 sites were published as *"Excavations of Archaeological Sites in Tamil Nadu (*1969-1995)" 2004, and the excavation reports of Alagankulam, Andipatti and Modur were also brought out in quick time. An unique publication on *"Rock art of Tamil Nadu"* has also been published.

In the field of Epigraphy, an *'intensive* campaign' was launched during his tenure. So far 17,200 epigraphs have been copied, 11,489 deciphered and 25 volumes published covering 2,985 inscriptions in Tamil Nadu; itself a distinctive achievement in the history of Tamil Nadu Epigraphy. Digitisation of epigraphs has commenced, and so far 4,954 epigraphs were digitized (which includes the Joint publication of 1915 inscriptions with ASI,, Mysore) in 8,580 frames. Quarterly journal "Kalvettu" Nos. 61 to 69 (9 issues) has been published during this period. The publications of following books standing to his credit are:

Inscriptions : Tamil Brahmi inscriptions; Tamil Nadu Inscriptions Volume I, Copper plates of Tamil Nadu Vol.I, Thanjavur taluk inscriptions - Vol.I, Papanasam taluk inscriptions - Vol.III & Inscriptions of Tami Nadu - 2004.

District Archaeological guidebooks; Madurai, Dharmapuri & Coimbatore.

Temple monographs; Alagarkoil, Tiruchendurai, Tirunavalur, Jambai & Vedaranyam.

. **Museum guide books; Poondi [Pre-Historic]** & Gangaikondacholapuram; Tarangampadi palm leaf manuscripts, Report on Conservation of Monuments, 2002-2005 in English and Tamil.

Digitisation of Siddha manuscripts at the Government Oriental Manuscripts Library and Research Centre.

He has participated in several International and National Seminars and made Power Point Presentation on various activities of the Department like Monuments, Epigraphy, Excavation, Archaeology, Rock Art, Antiquities, and GOML&RC for the general interest of scholars, researchers and the general public. For the first time in 45 years, the departmental float took part in the Republic Day Celebrations during January 2006, which added a glorious feather in the cap of the department.